CITIZEN

Service Manual

LINE THERMAL PRINTER

MODEL **CBM-262**

Rev.1.00 First created June.18th,1996

Japan CBM Corporation

REVISION

Rev.No.	Date	Content
Rev. 1.00	June.18,1996	First created

CONTENTS

CHAPTER 1

DISASSEMBLY
REASSEMBLY
MAINTENANCE

CHAPTER 1

Disassembly,Reassembly,Maintenance

Contents

1 Disassembly,Reassembly,Maintenance

1. Cautions Concerning Maintenance

Warning

(1) When disassembling, reassembling or adjusting the printer, disconnect the AC adapter from the printer.
(2) When replacing a fuse, switch off the power switch first.
(3) A fuse is used for fire prevention. Be sure to use the same type when replacing the fuse.

Exercise caution regarding the following items when performing maintenance.

Caution

(1) Do not disassemble and reassemble, or make adjustments to the printer unnecessarily when there is no abnormal or malfunctioning condition. In particular, do not loosen any of the installation screws for any of the printer's components unnecessarily.
(2) When finishing the maintenance, always check to make sure there is nothing abnormal before switching on the power.
(3) By all means avoid printing without paper set in the printer.
(4) Make sure the printer has been set correctly.
(5) Do not place items on top of the cover or lean anything against it during maintenance or during printer operetion.
(6) Be careful not to leave parts or screws, etc. used during maintenance lying around loose inside the printer.
(7) When handling printed circuit boards, do not wear gloves which can easily generate a static charge. The CPU, RAM, ROM and other IC's can be destroyed by static electricity, so do not touch the leads or window carelessly.
(8) Do not place the printed circuit boards directly on equipment or on the floor.
(9) During disassembly and reassembly, check wiring cords for damage, and do not exert undue force on the wires during installation.

2. Supplying Oil

(1) Oiling Intervals

This printer is maintenance free, and supplying of oil is unnecessary under conditions of normal use. Supply oil when disassembling, reassembling, replacing parts or cleaning.

(2) Types of Oil

Froil Grease, Cat. No.G-311S, Kanto Kasei Kogyo (Co.,Ltd.)
Epiknock Grease, Cat. No.AP-1, Nihon Sekiyu (Co.,Ltd.)

(3) Oil Supply Quantities

Reper to the following table when supplying oil.

No.	Place Oiled	Type of Oil	Amount Supplied
1	Spool Gear Shaft Spool Idle Gear Shaft	Epiknock Grease	0.2 mm width, 3 places.
2	Spool spring insert of spool idle gear	Epiknock Grease	0.2 mm width, entire circumference.
3	Both ends of paper holder roller Circumference of the vibrator unit.	Froil Grease	0.2 mm width, 3 places.

3. Maintenance Tools

The following maintenance tools are necessary when replacing components, etc. in the printer in field service.

No.	Name	Quantity	Use	Remarks
1	No.1(+)Screwdriver (Shaft length: 200 mm)	1	For M3, M4 mm screws	
2	No.2(+)Screwdriver (Shaft length: 200 mm)	1	For M2-M2.6 mm screws	
3	(–)Screwdriver	1		
4	Tweezers	1		
5	Tester	1		
6	Needle Nose Pliers	1		
7	(+)Screwdriver: Precision Screwdriver	1		
8	Dial Tension Gauge	1		
9	Socket Wrench (Small) Opposite side distance: 8 mm	1	For M6	
10	Socket Wrench (Large) Opposite side distance: 14 mm	1	For M12	

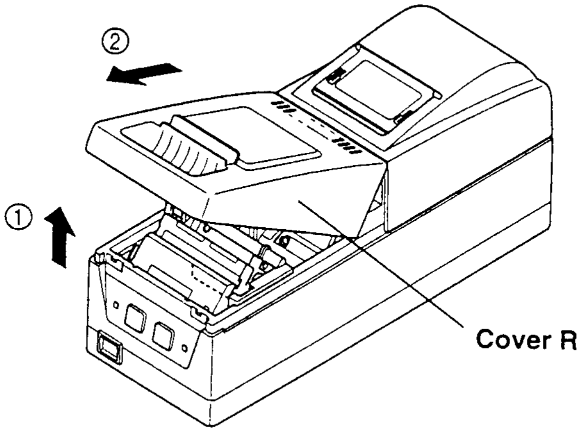
4. Other

For disassembly and reassembly of the printer unit (following), refer to the LT-283 Series Service Manual.

5. Removing the Printer Covers

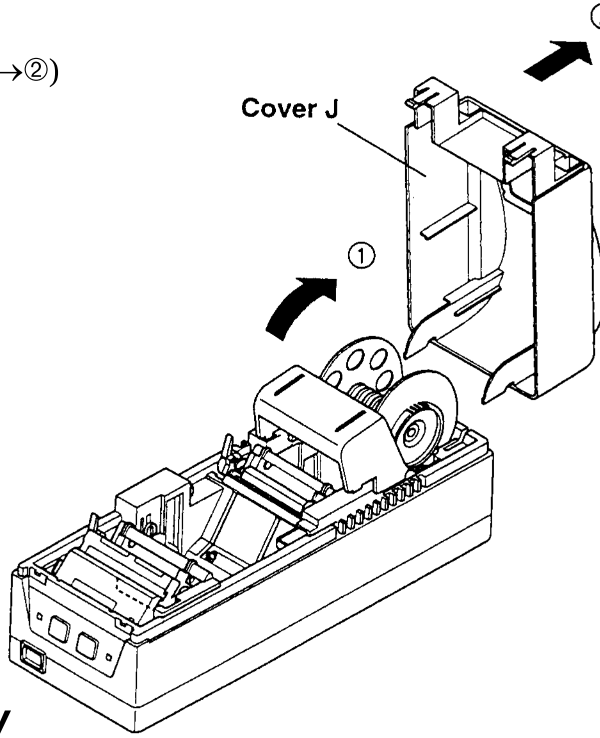
■ Removing the Cover R

1) Open the Cover R.(→①)
2) Pull it out toward the front.(→②)



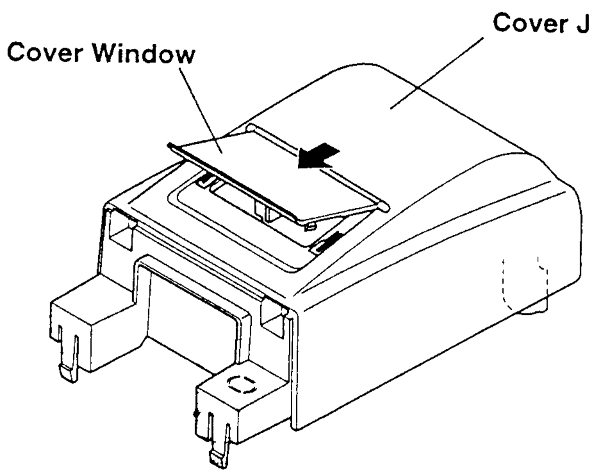
■ Removing the Cover J

1) Open the Cover J.(→①)
2) Open it further toward the back and pull it out.(→②)



6. Removing the Cover Window

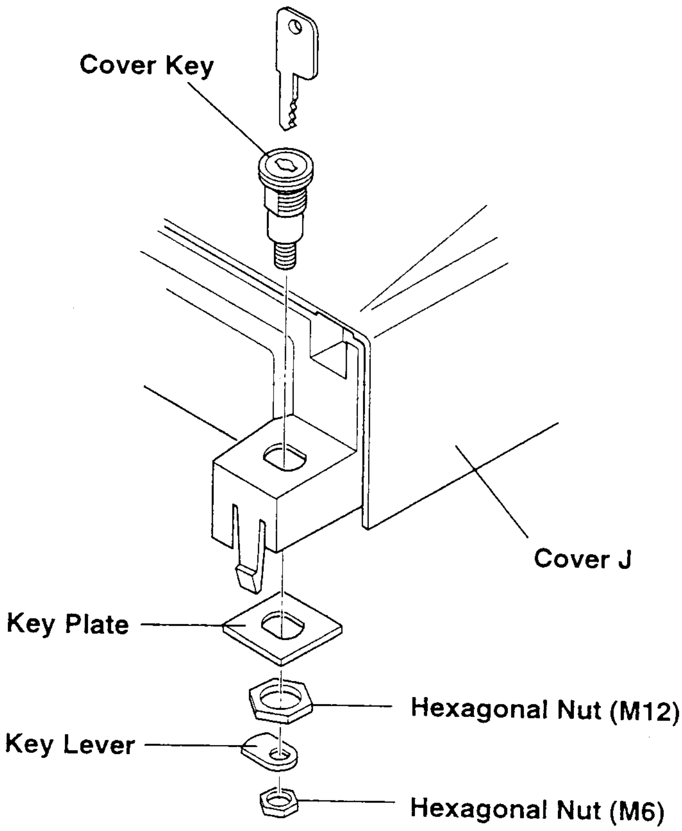
Press on the center of the cover window,
then remove it while deflecting it.



7. Removing the Journal Cover Key

If the optional cover key is set, remove the key by the following procedure.

1) Take out the hexagonal nut (M6).
2) Remove the key lever.
3) Take out the hexagonal nut (M12).
4) Remove the key plate.
5) Pull the key out toward the top.



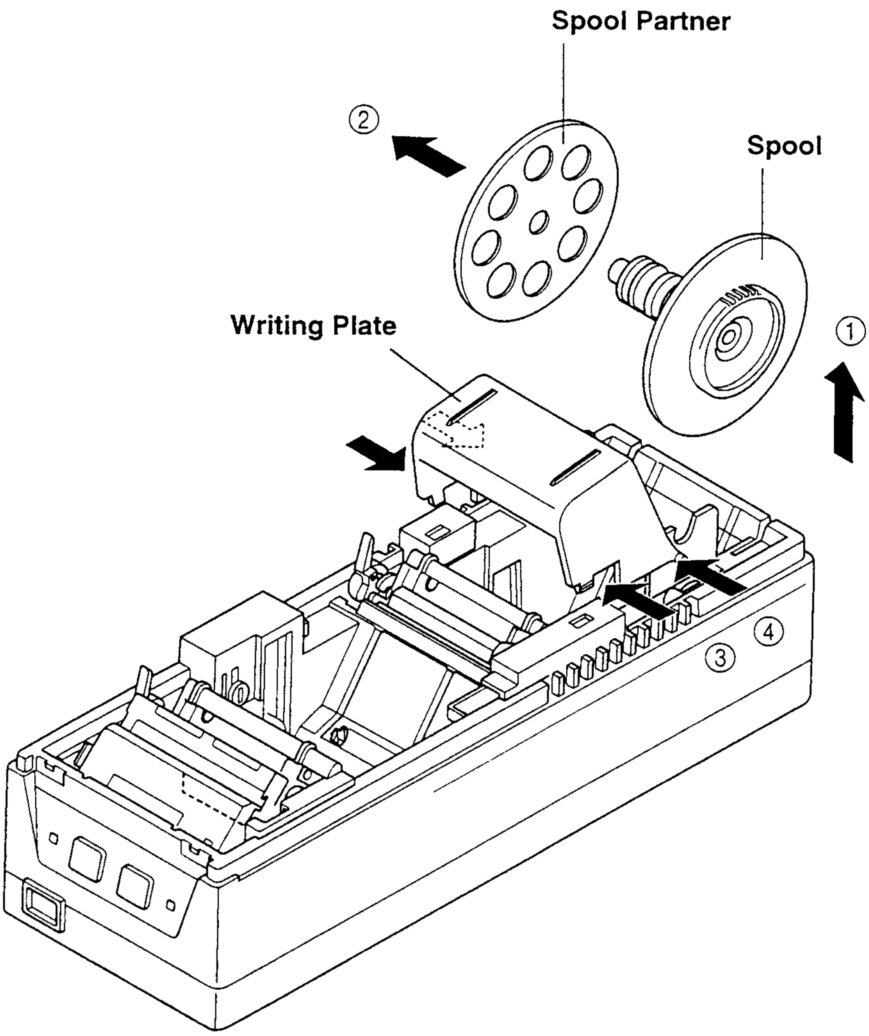
8. Removing the Spool and Writing Plate

■ Removing the Spool

1) Remove the spool by lifting it in the arrow ① direction.
2) Take the spool partner out in the arrow ② direction.

■ Removing the Writing Plate

1) Press the arrow mark ③ on the writing plate to release the lock.
2) Pull the writing plate out while pushing on the snap-in tabs in the arrow ④ direction.



9. Removing the Case L

1) Take out the four screws holding the case L.
2) Set the printer's paper release lever toward the rear.
3) Remove the case L.

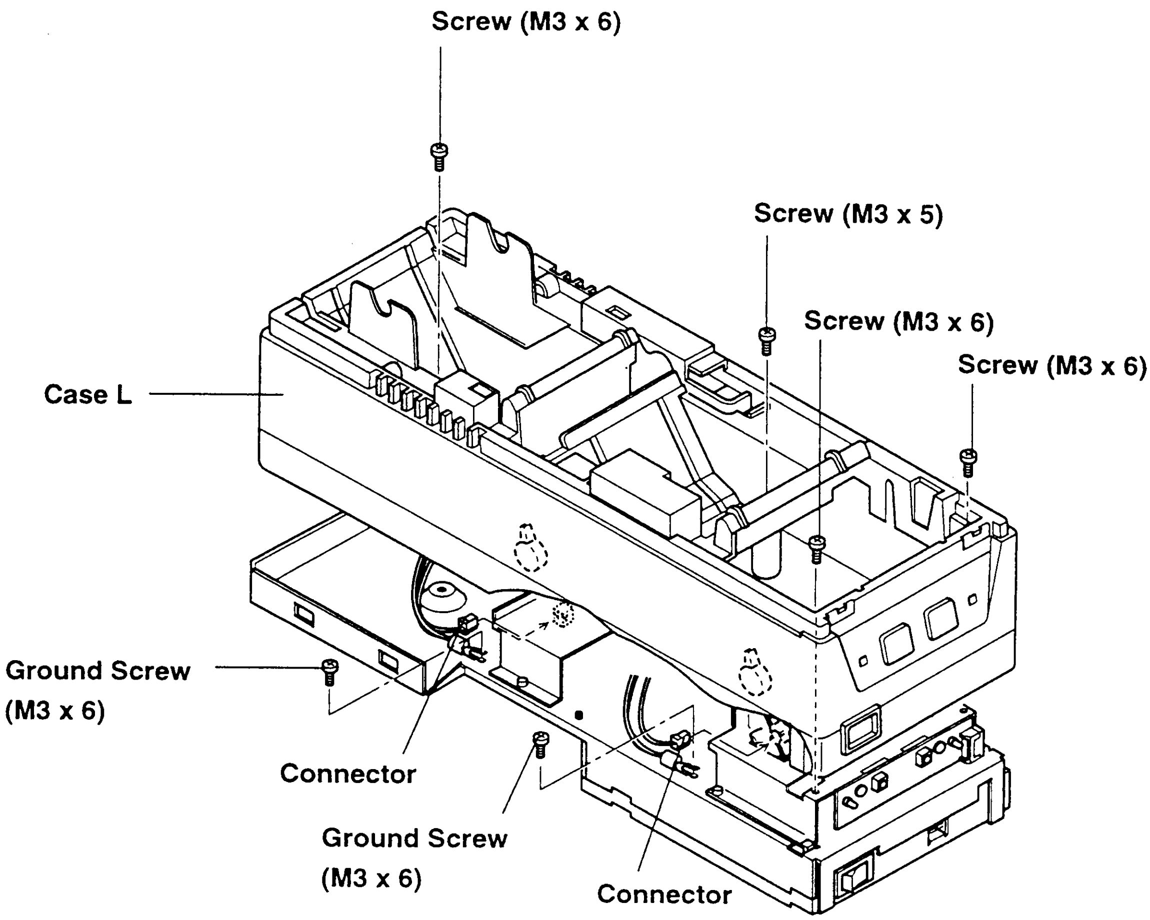
Note

When removing the case L, be careful not to pull on or break any cables.

4) Loosen the ground wire screws (2 pcs).
5) Disconnect the connectors (2 pcs).

Note

Do not disconnect them by pulling on the wires.



10. Removing the Near End Switch Subassembly

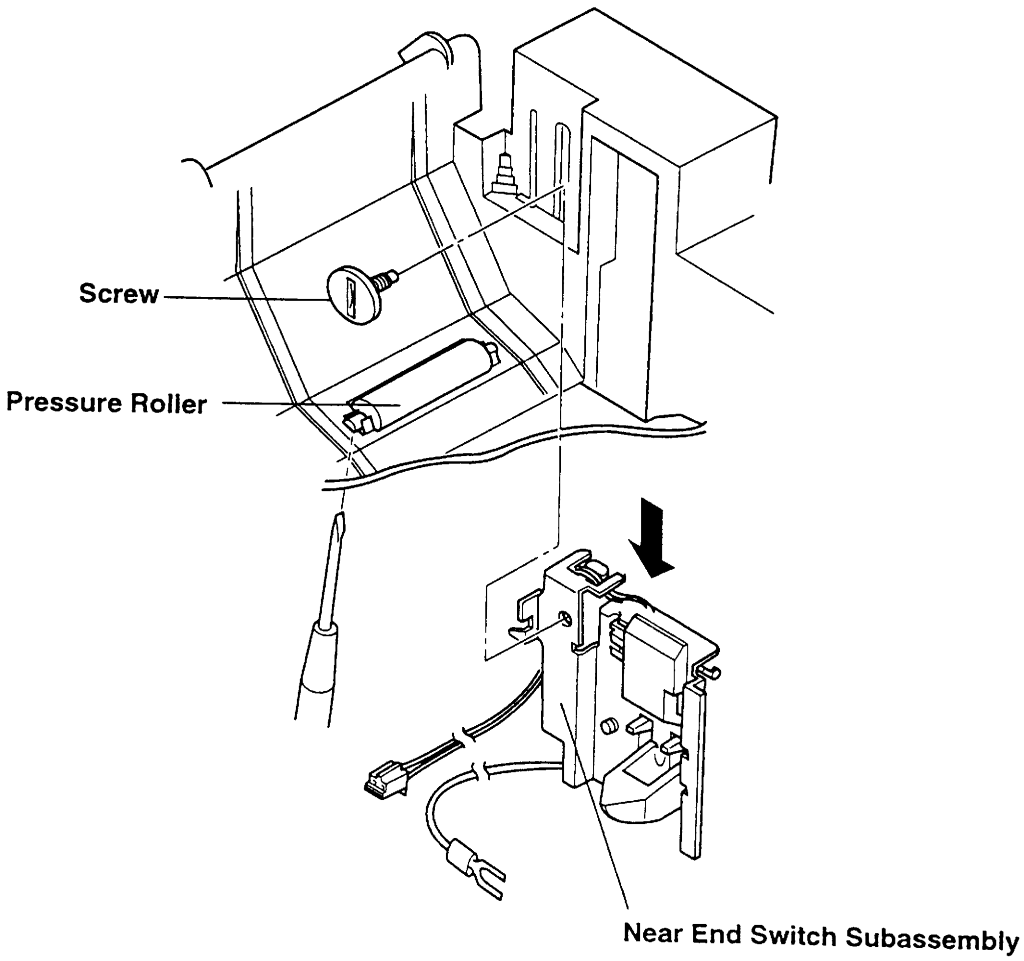
1) Using a coin, etc. loosen the screw holding the near end switch subassembly.
2) Remove the near end switch subassembly in the arrow direction.

Note

Near end switch subassemblies are located in two places, on the receipt side and on the journal side.

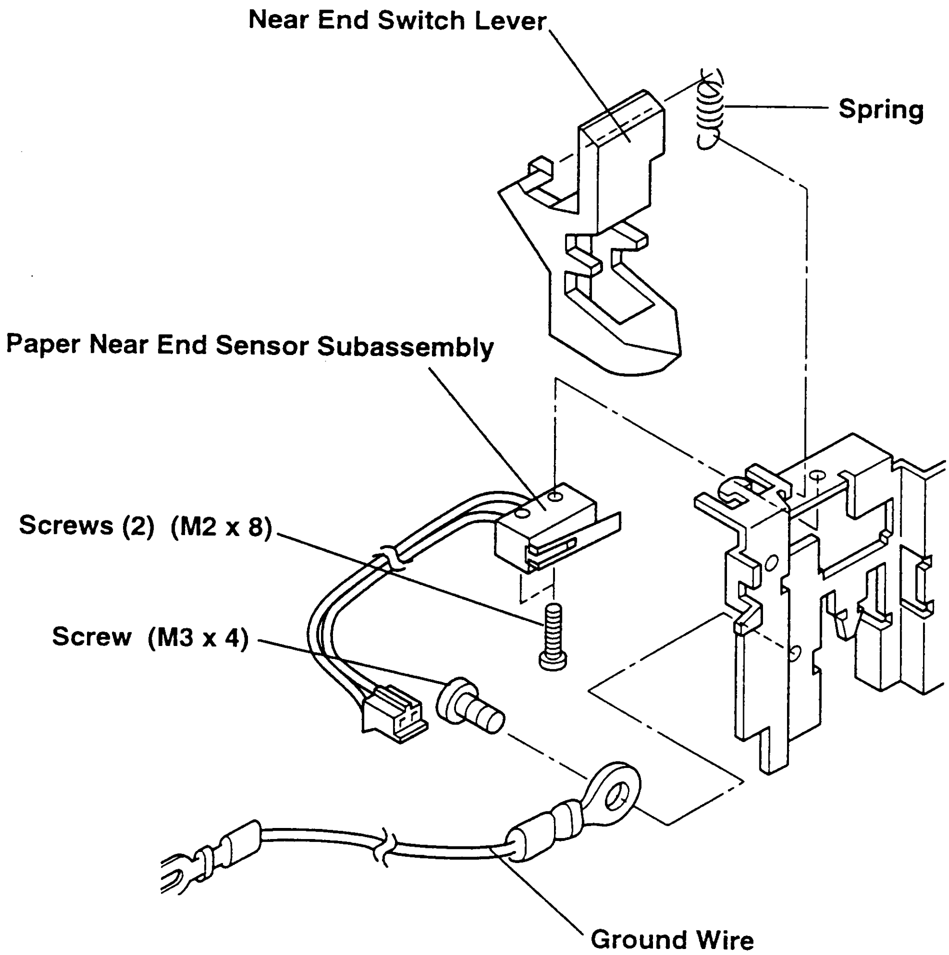
11. Removing the Pressure Roller

Using a precision screwdriver or similar tool, push the pressure roller out from the rear.



12. Removing the Paper Near End Sensor Subassembly

1) Remove the screw used to set the ground wire.
2) Remove the spring holding the near end switch lever.
3) Remove the near end switch lever.
4) Take out the two screws holding the paper near end sensor subassembly (microswitch).



13. Removing the Receipt and Journal Printer Units and Winder Drive Subassembly

■ Removing the Receipt Printer Unit

1) Take out the two screws holding the printer unit.
2) Disconnect Cable 1, Head Cable 1 and the Operation Panel Cable from the printer unit.

Note
Be careful not to pull on the connectors and cables so as to break them.

3) Remove the printer unit.

Note
For disassembly and reassembly of the printer unit, refer to the LT-283 Series Service Manual.

■ Removing the Journal Printer Unit

1) Take out the two screws holding the printer unit.
2) Disconnect Cable 2 and Head Cable 2 from the printer unit.

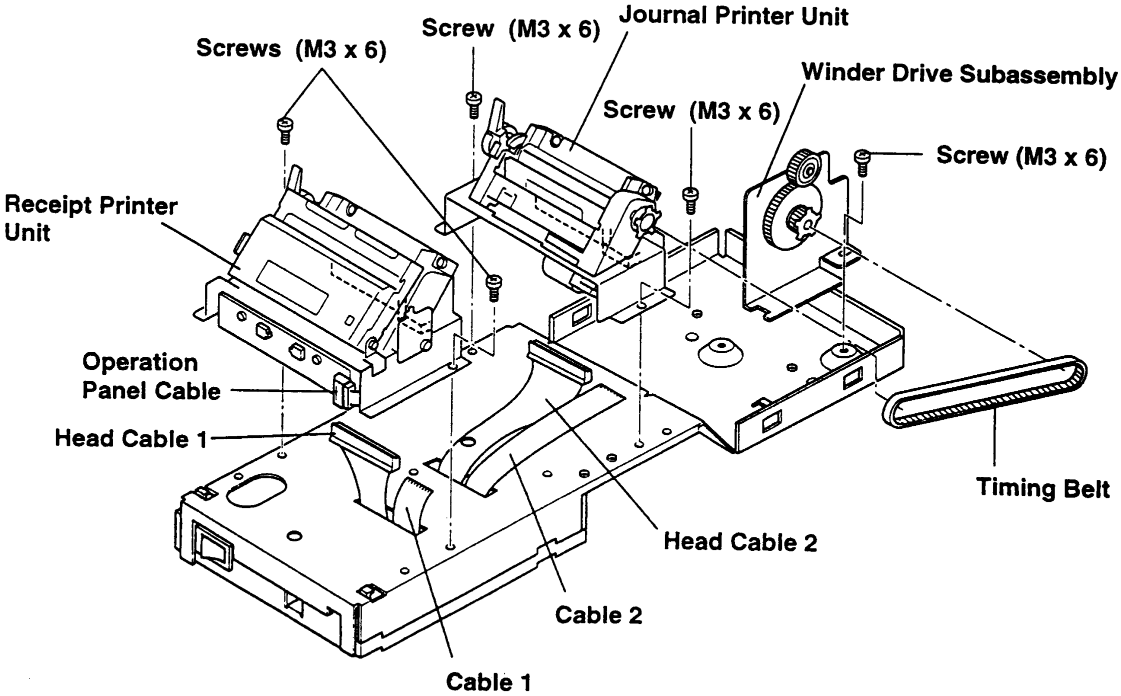
Note
Be careful not to pull on the connectors and cables so as to break them.

3) Remove the printer unit.

Note
For disassembly and reassembly of the printer unit, refer to the LT-283 Series Service Manual.

■ Removing the Winder Drive Subassembly

1) Remove the timing belt.
2) Take out the screw holding the winder drive subassembly.
3) Remove the winder drive subassembly.

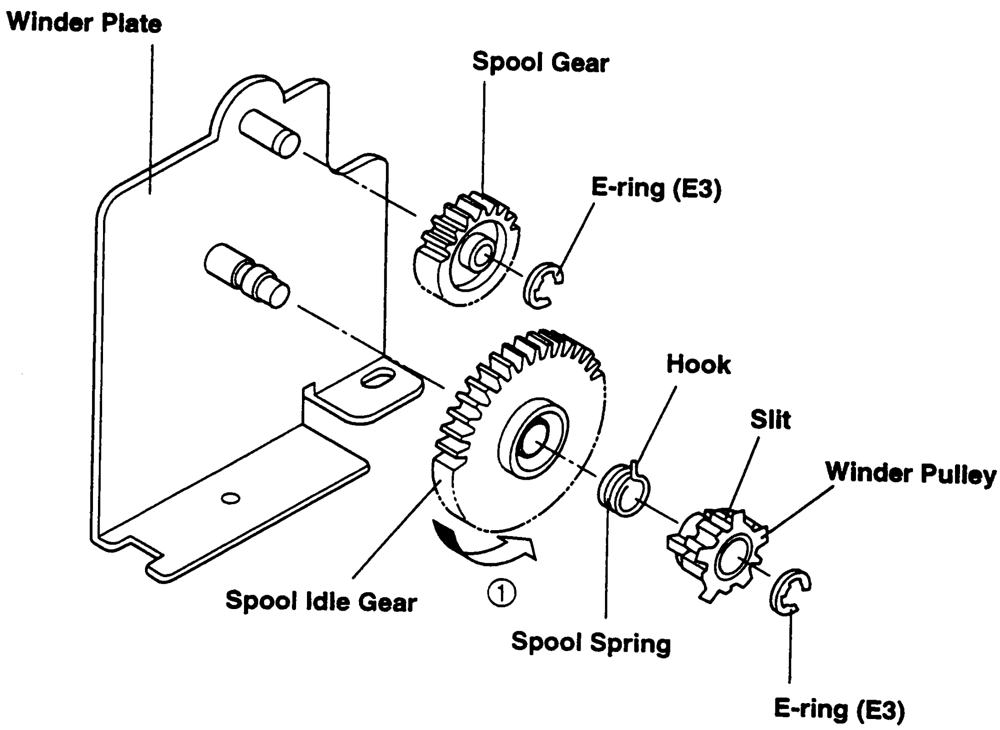


14. Removing the Spool Gear, Winder Pulley and Spool Idle Gear

1) Remove the E-ring holding the spool gear.
2) Take off the spool gear.
3) Remove the E-ring holding the winder pulley.
4) Take off the winder pulley.
5) Take off the spool idle gear.
6) Take hold of the hook of the spool spring with a pair of tweezers, then turn the spool idle gear in the arrow direction ① (the direction in which the spring becomes loose) and remove the spool spring.

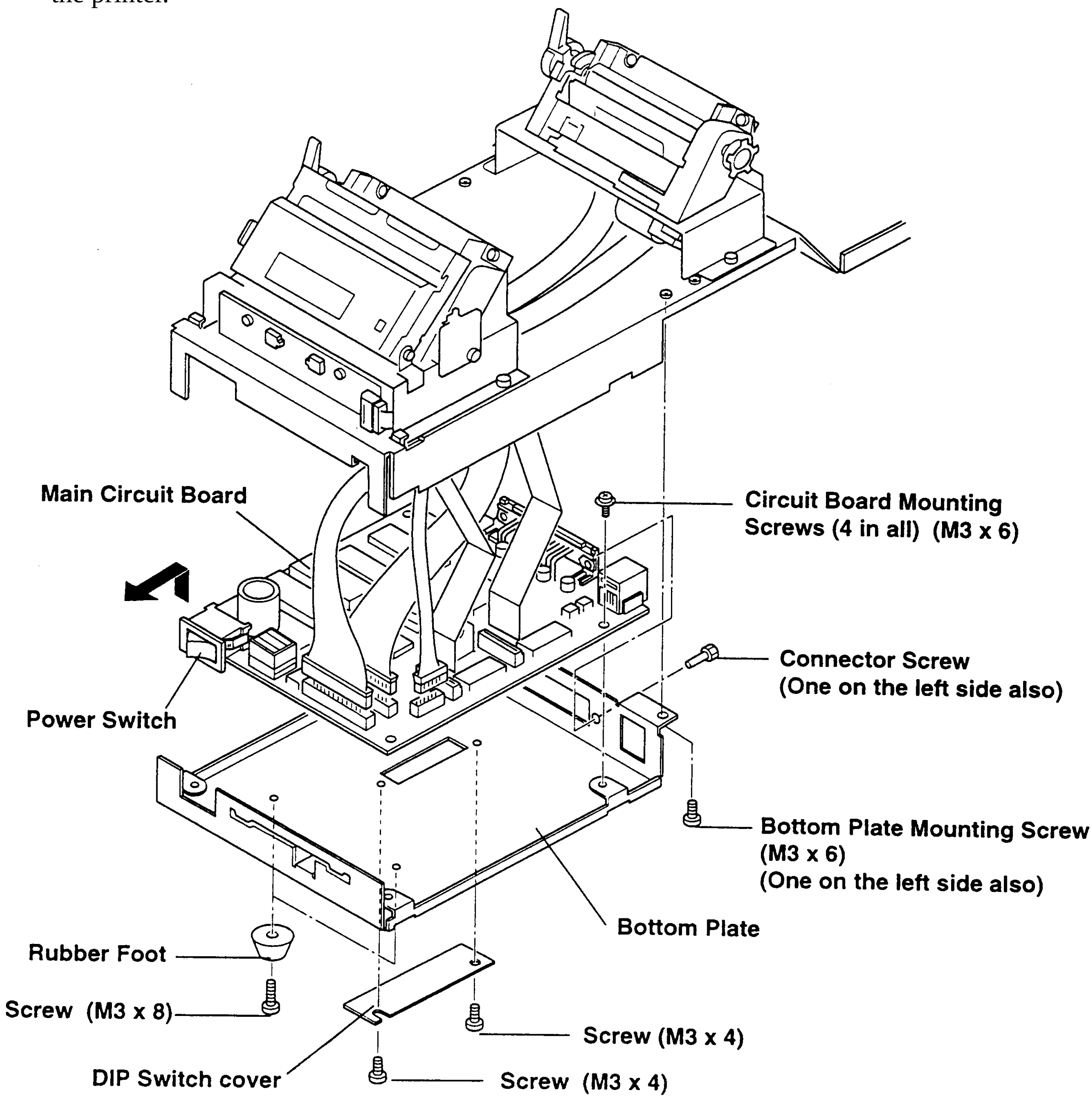
Note :Cautions in Reassembly

1) Assemble the spool spring with the hook toward the front.
2) Align the slit in the winder pulley with the hook of the spool spring to assemble.



15. Removing the Bottom Plate

1) Take out the two screws holding the bottom plate.
2) Disconnect the cables connected to the main circuit board.
3) Take out the four screws used to mount the main circuit board.
4) Take out the two screws holding the interface connector.
5) Remove the main circuit board in the arrow direction while lifting up the power switch side of the printer.



16. Removing the Rubber Feet and DIP Switch Cover

1) Take out the screws holding the rubber feet.
2) Take out the two screws holding the DIP switch cover.

17. Removing the Bracket R (Receipt Side)

■ Removing the Auto Cutter

1) Take out the two screws holding the auto cutter.
2) Remove the auto cutter upward.
3) Disconnect the connector connecting the auto cutter and the relay board.

■ Removing the Auto Cutter Paper Guide

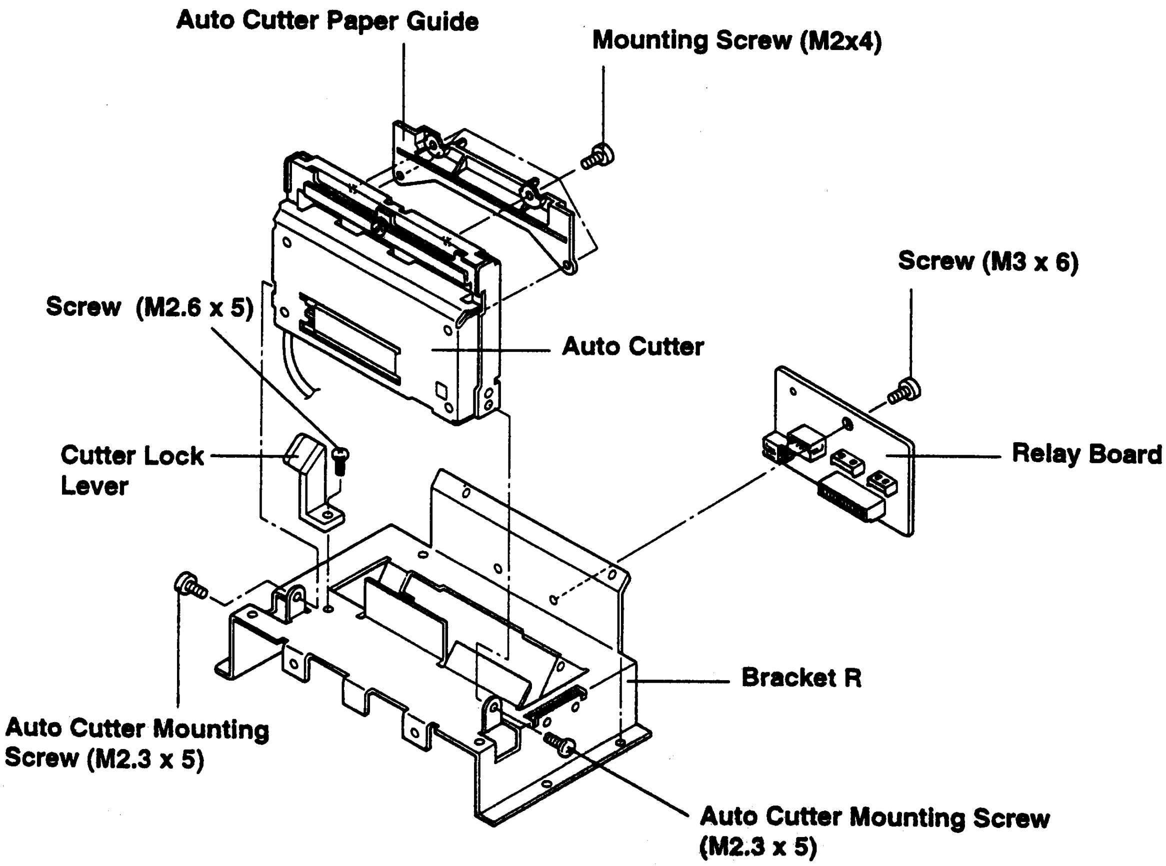
1) Take out the four screws holding the auto cutter paper guide.
2) Remove the auto cutter paper guide.

■ Removing the Relay Board

1) Take out the screw holding the relay board.
2) Remove the relay board.

■ Removing the Cutter Lock Lever

1) Take out the screw holding the cutter lock lever.
2) Remove the cutter lock lever.

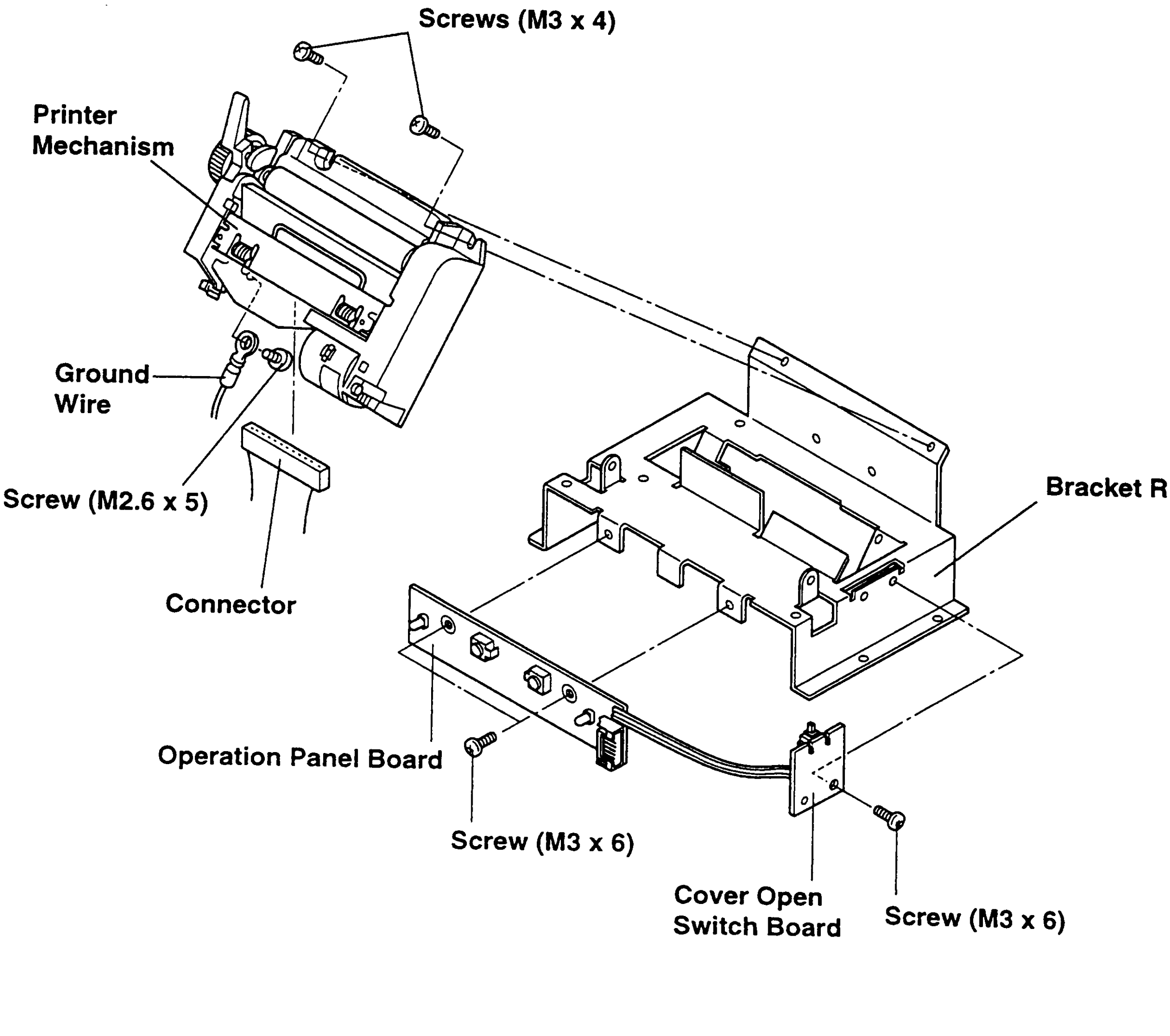


■ Removing the Printer Mechanism

1) Take out the two screws holding the printer mechanism.
2) Remove the printer mechanism upward.
3) Take out the screw used to attach the ground wire.
4) Disconnect the connector connecting the printer mechanism and the relay board.

■ Removing the Operation Panel Board and the Cover Open Switch Board

1) Take out the two screws holding the operation panel board.
2) Take out the screw holding the cover open switch board.
3) Remove the operation panel and cover open switch board.



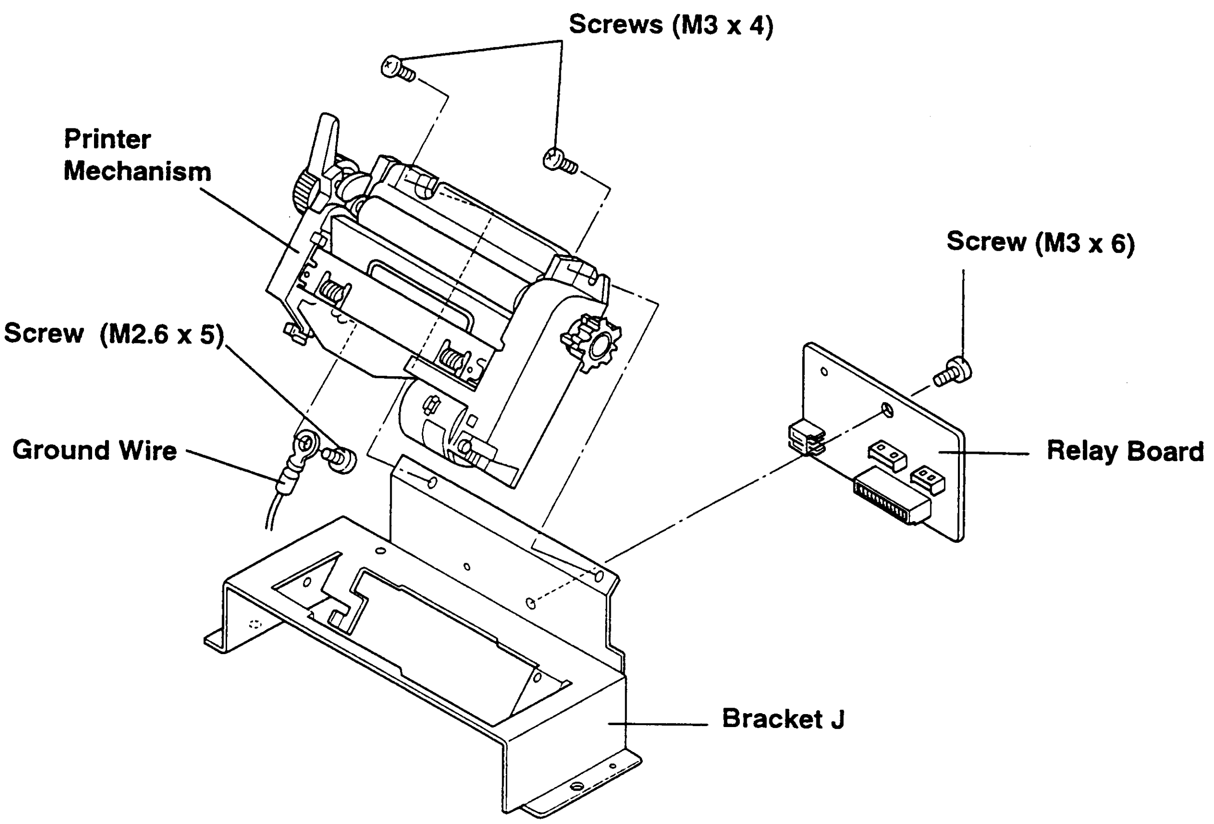
18. Removing the Bracket J (Journal Side)

■ Removing the Printer Mechanism

1) Take out the two screws holding the printer mechanism.
2) Remove the printer mechanism upward.
3) Take out the screw used to attach the ground wire.
4) Disconnect the connector connecting the printer mechanism and the relay board.

■ Removing the Relay Board

1) Take out the screw holding the relay board.
2) Remove the relay board.



19. Cautions Concerning Reassembly and Adjustments

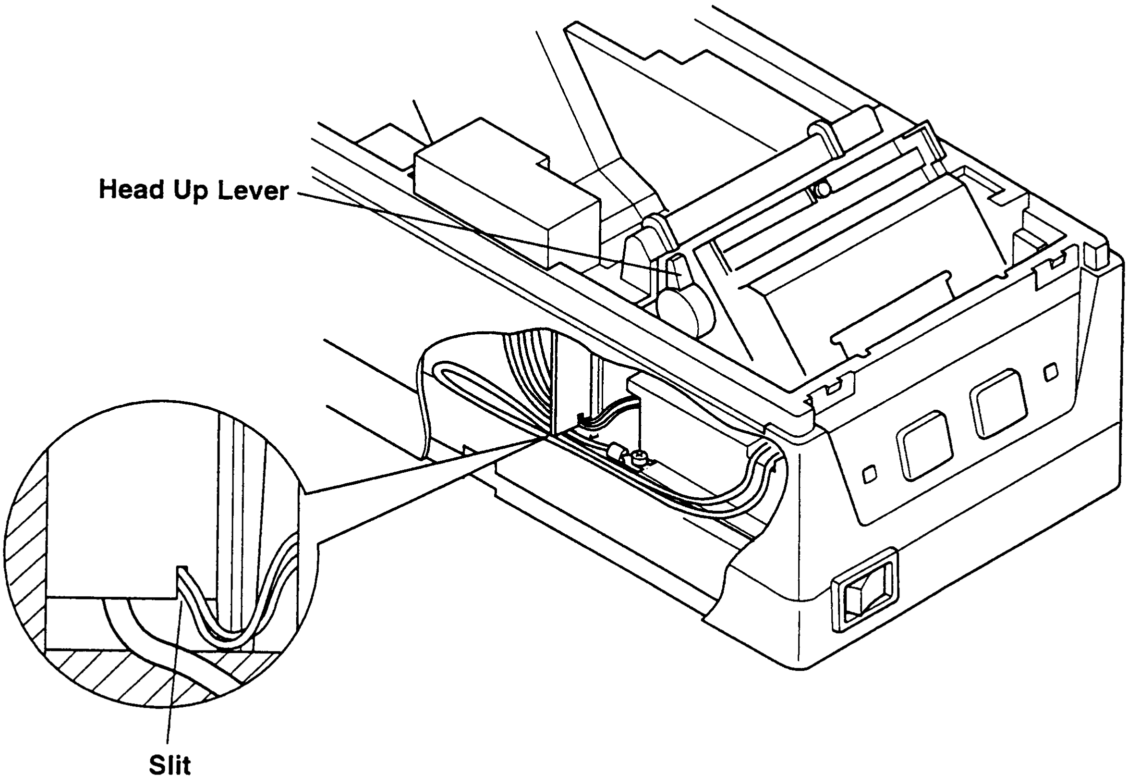
Reassembly is done by following the disassembly procedure in reverse order. However, observe the following cautions during reassembly.

■ Cautions When Reassembling the Case L

1) Set the printer mechanism's head up lever in the head down state.
2) Insert the near end cable in the slit on the rear of the case L as shown in the illustration.

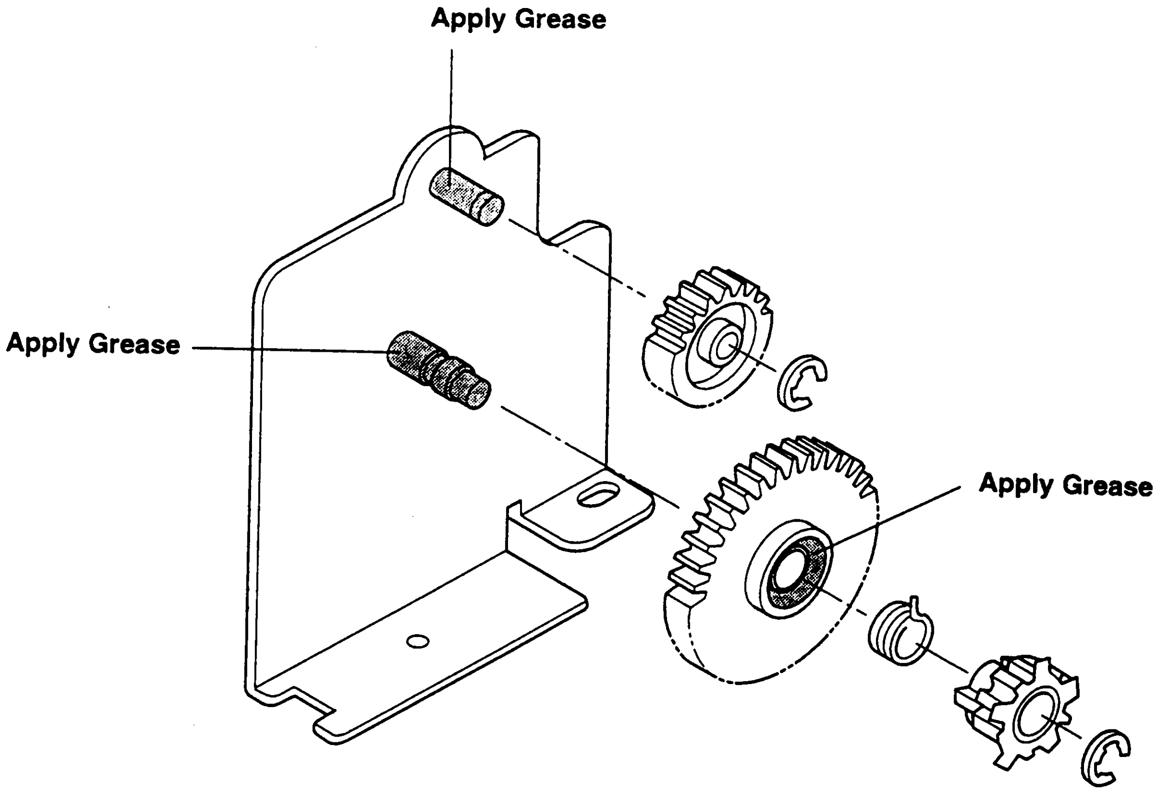
Note

If assembled with the cable not inserted in the slit, the near end cable could be pinched and be broken. Be sure to run the cable through the slit.



■ Cautions When Reassembling the Winder Drive Subassembly

Apply Epiknock Grease to the gear shafts (2 places) and the spool idle gear (1 place).



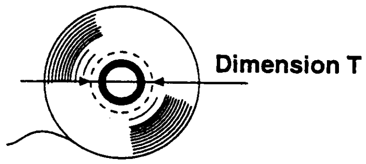
■ Adjusting the Near End Switch Subassembly

The receipt side and journal side near end sensors are for signaling to the ERROR indicator when the diameter of the roll paper becomes small. since the amount of roll paper remaining can differ depending on the thickness of the roll's core, adjust the sensor to match the thickness of the roll paper core as shown below.

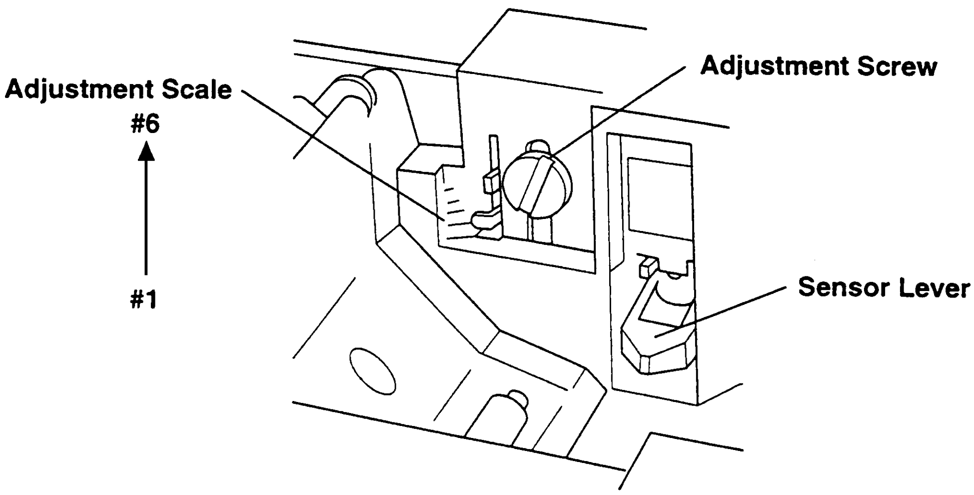
Tighten the adjustment screw to align with the appropriate step on the adjustment scale.

The criteria of the steps on the adjustment scale are as follows when roll paper with a core inner diameter of ø 12 mm and a core outer diameter of ø18 mm is used.

Adjustment Scale Step	Dimension T
#1	Approx. 18mm
#2	Approx. 20mm
#3	**Approx. 22mm**
#4	Approx. 24mm
#5	Approx. 26mm
#6	Approx. 28mm



*Dimension T = Remaining Diameter of Roll Paper
*Factory defaut of scale is #3.



Note

Since the value of dimension T corresponding to the adjustment scale steps is a calculated value, there may be slight variations.

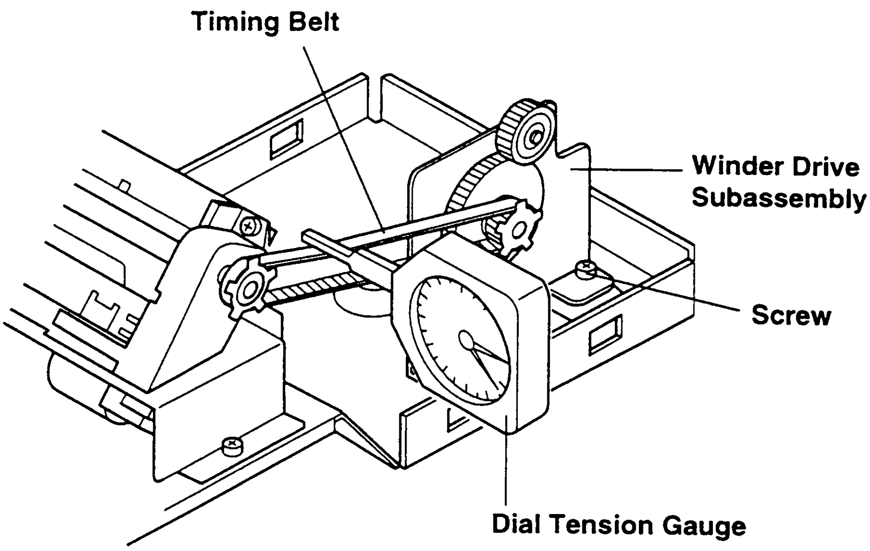
■ Adjusting the Timing Belt

1) Loosen the screw holding the winder drive subassembly.
2) Adjust the belt tension to the specified value using a dial tension gauge.

Note

To adjust the belt tension, loosen the winder drive subassembly mounting screw and move the winder drive subassembly backward or forward.

3) After adjustment to the specified value, tighten the screw securely, then check again that the timing belt's tension is at the specified value.



Specified Value: 15g ± 5g
(Belt deflection 2.5 mm)

CHAPTER 2

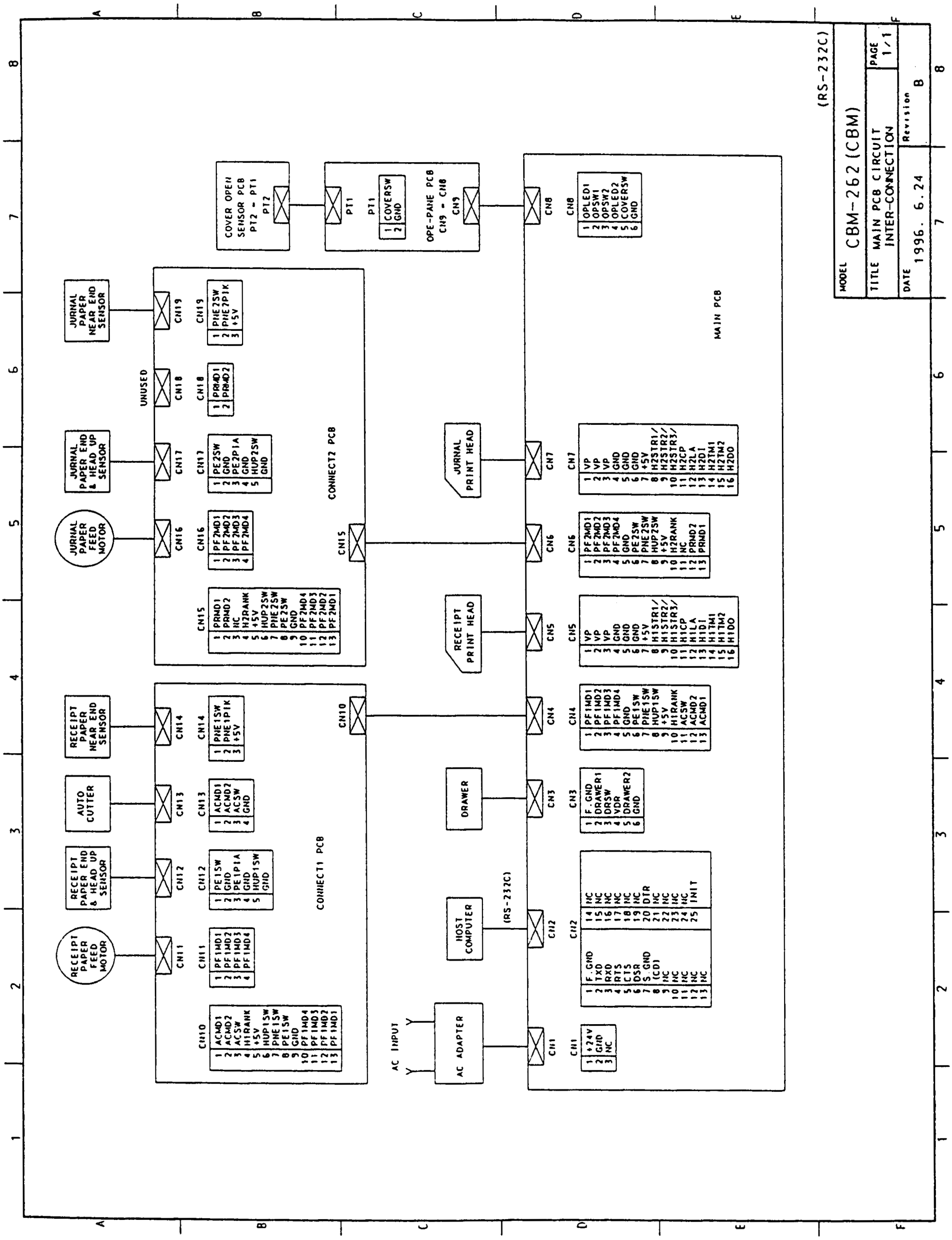
CIRCUIT DIAGRAMS

CHAPTER 2

Circuit Diagrams

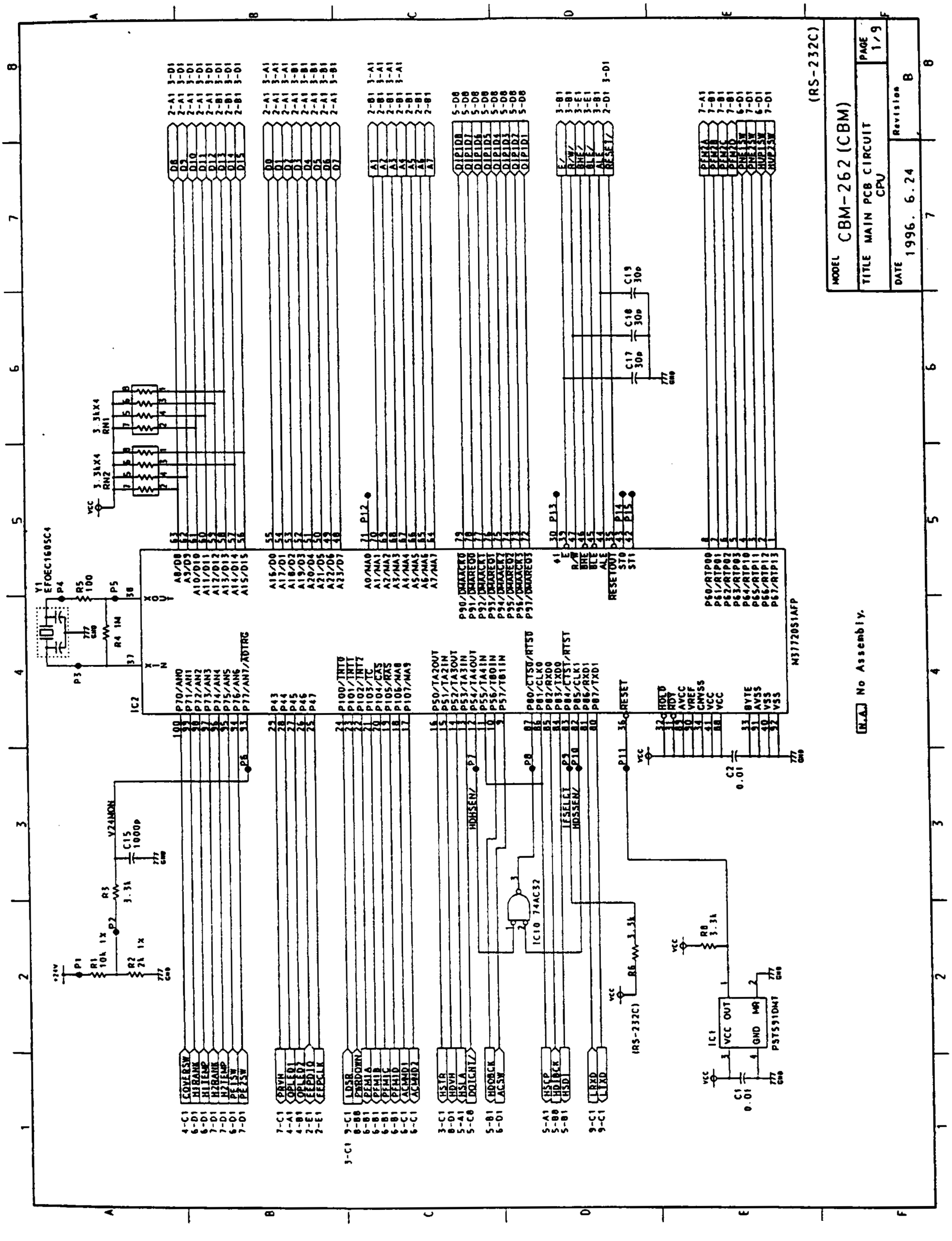
Contents

1. INTER-CONNECTION (RC-232C)



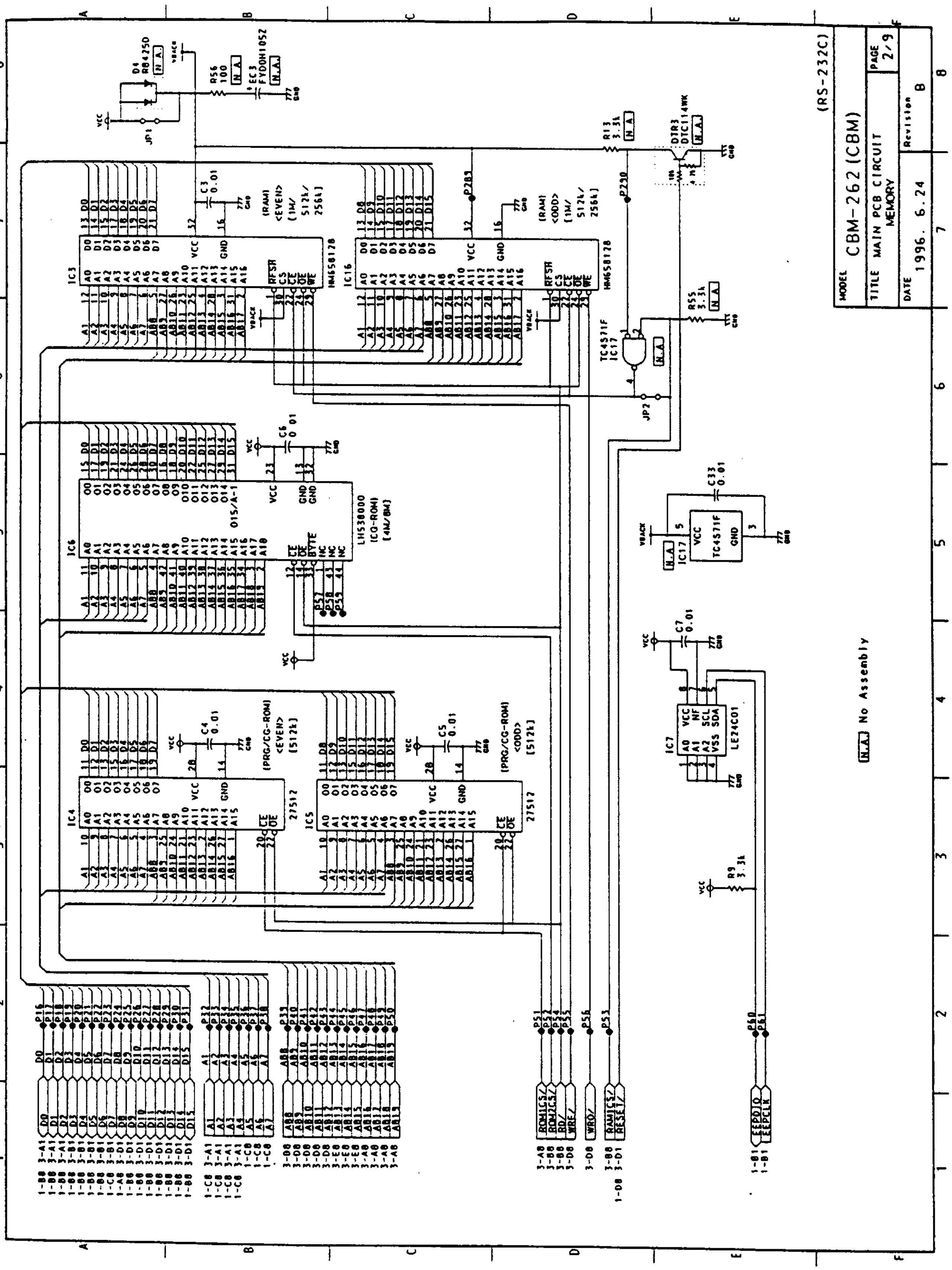
2. MAIN PCB (RC-232C)

● *CPU*



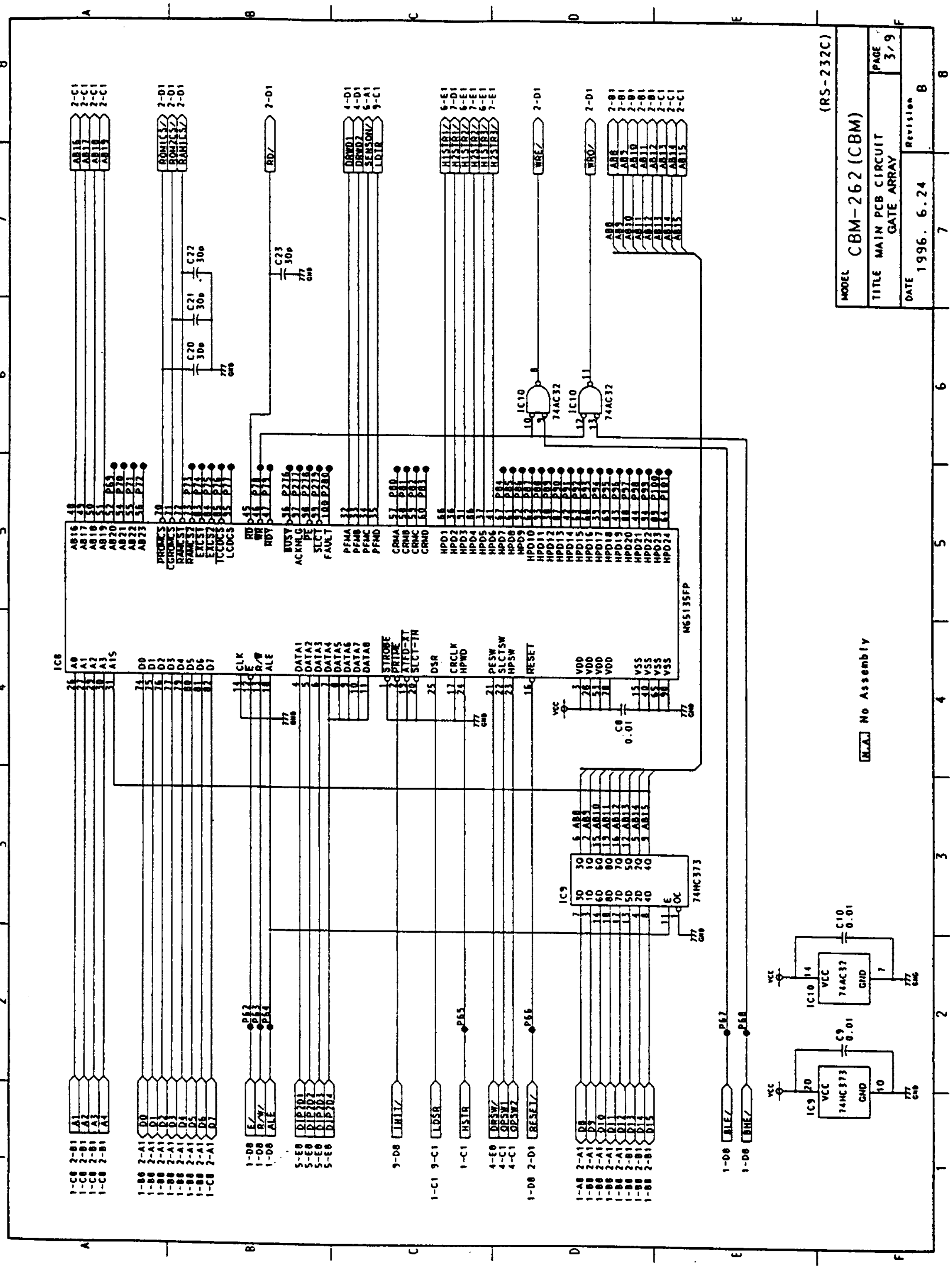
MAIN PCB (RC-232C)

● *MEMORY*



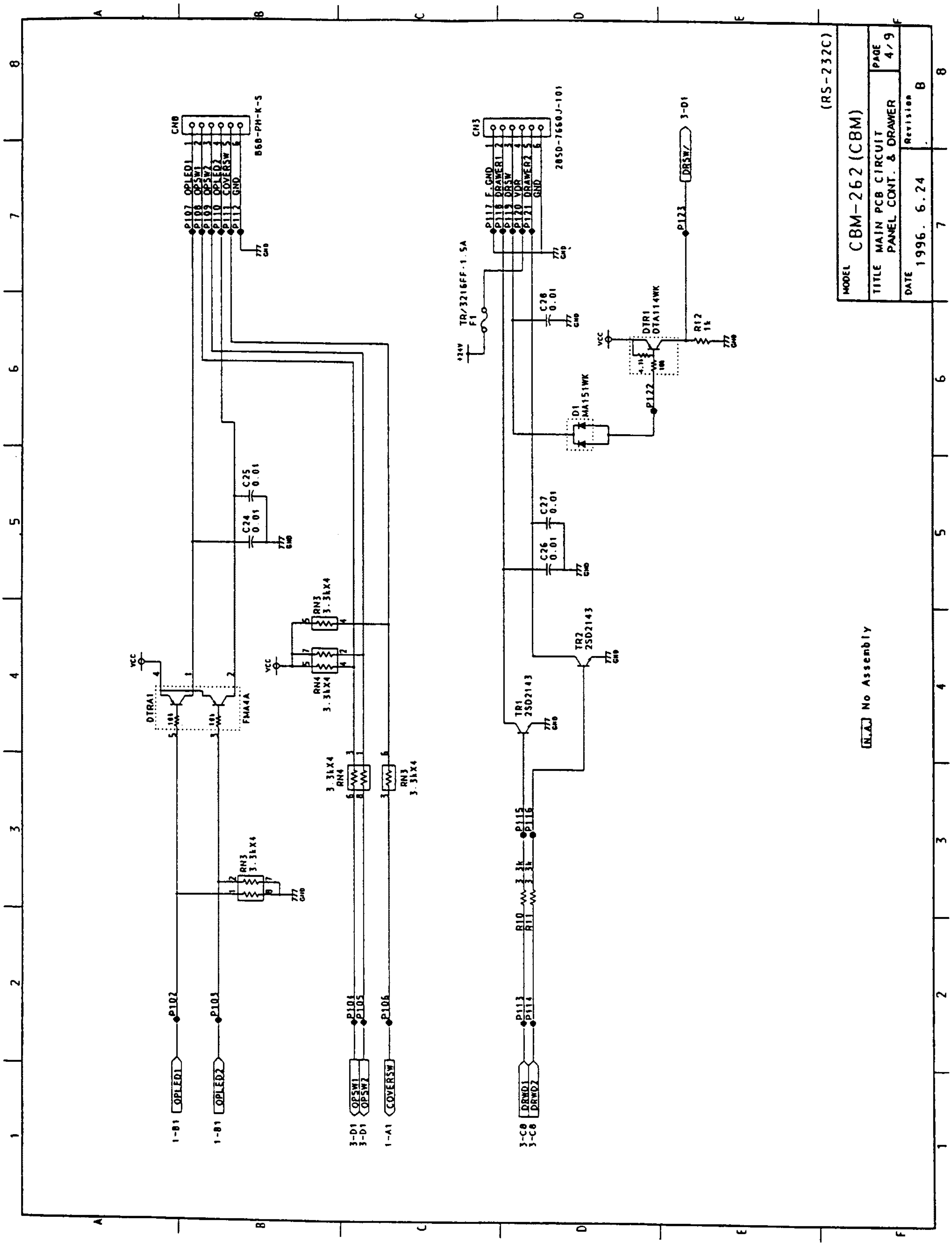
MAIN PCB (RC-232C)

● *GATE ARRAY*



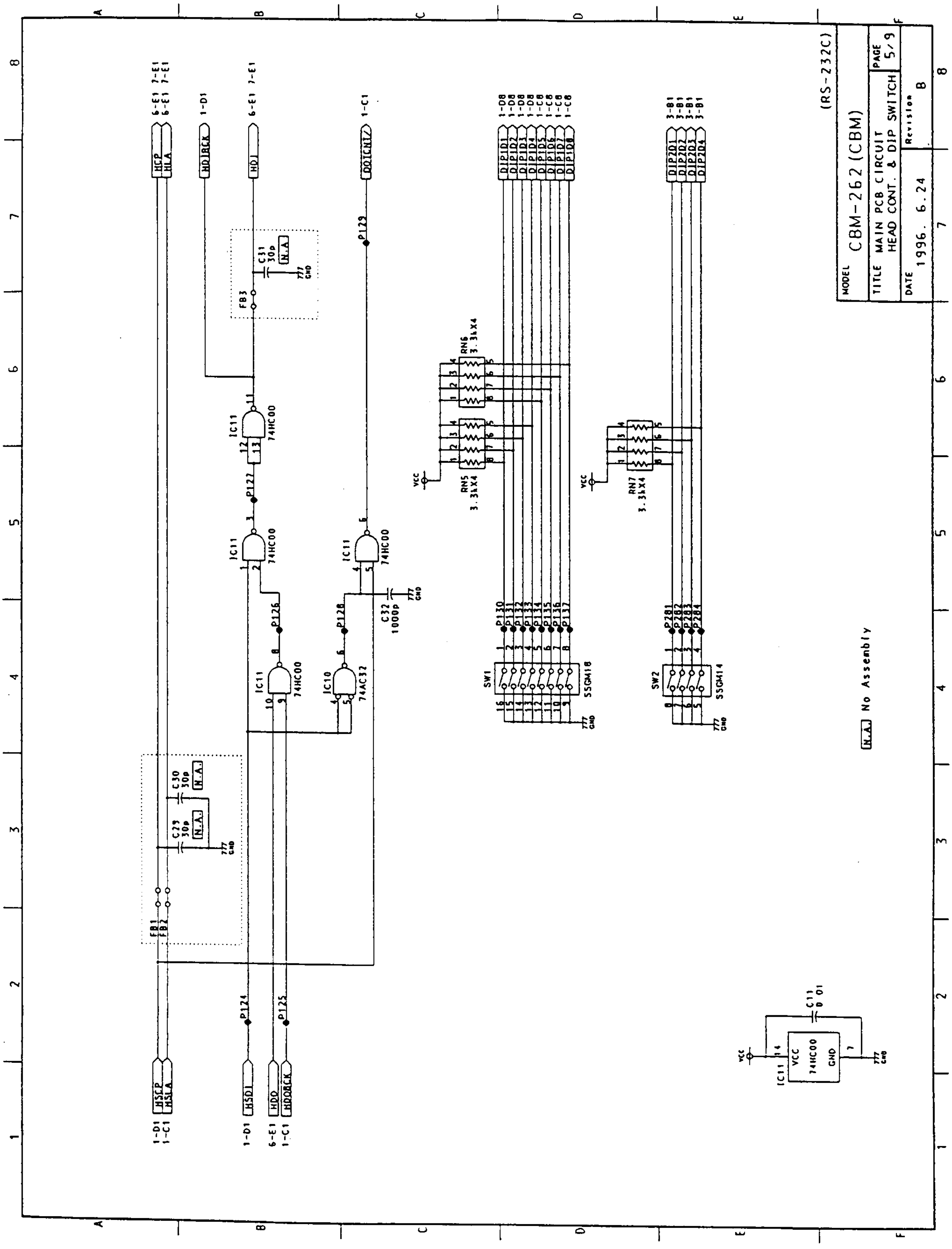
MAIN PCB (RC-232C)

● *PANEL CONT.&DRAWER*



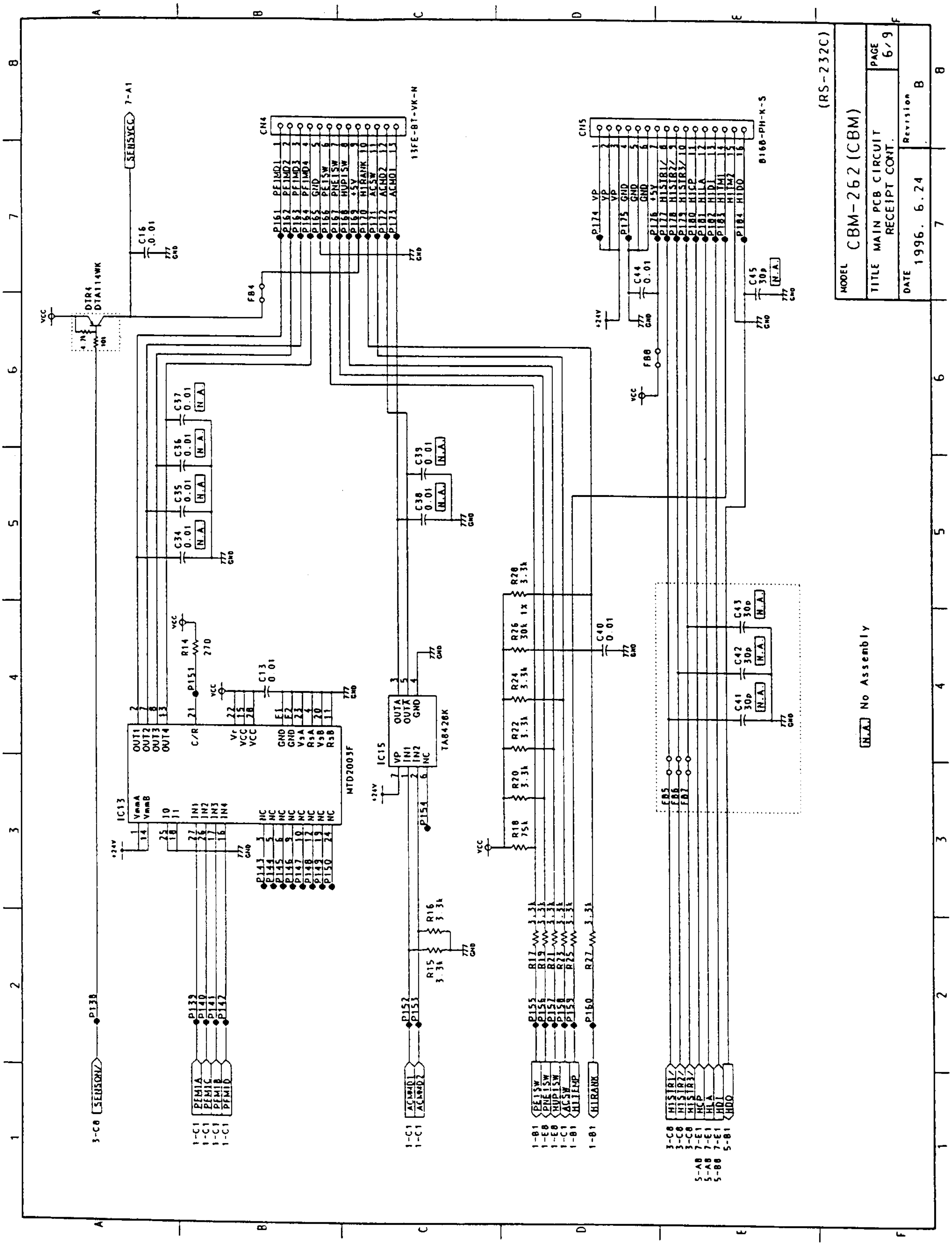
MAIN PCB (RC-232C)

● *HEAD CONT.& DIP SWITCH*



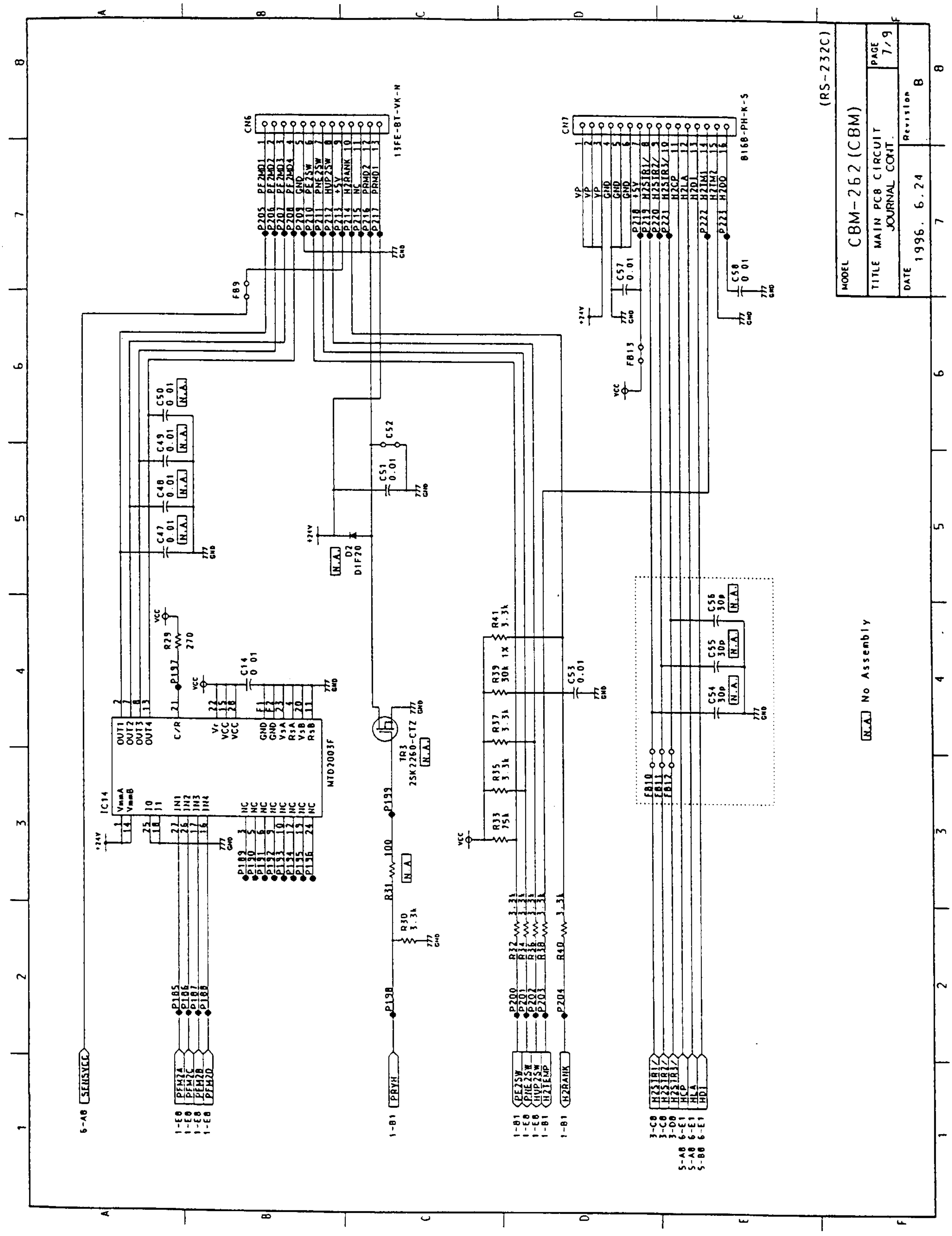
MAIN PCB (RC-232C)

● RECEIPT CONT.



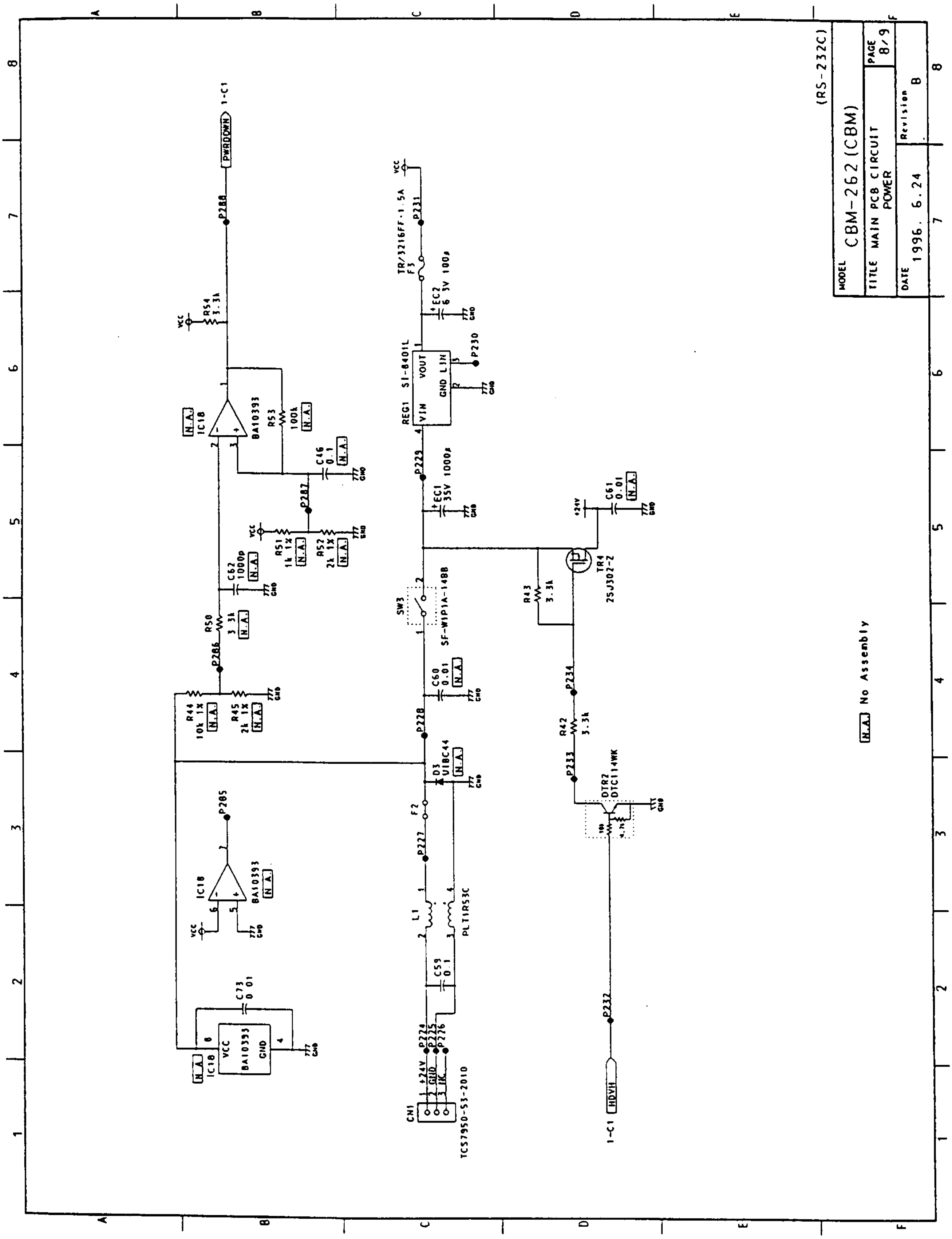
MAIN PCB (RC-232C)

● *JOURNAL CONT.*



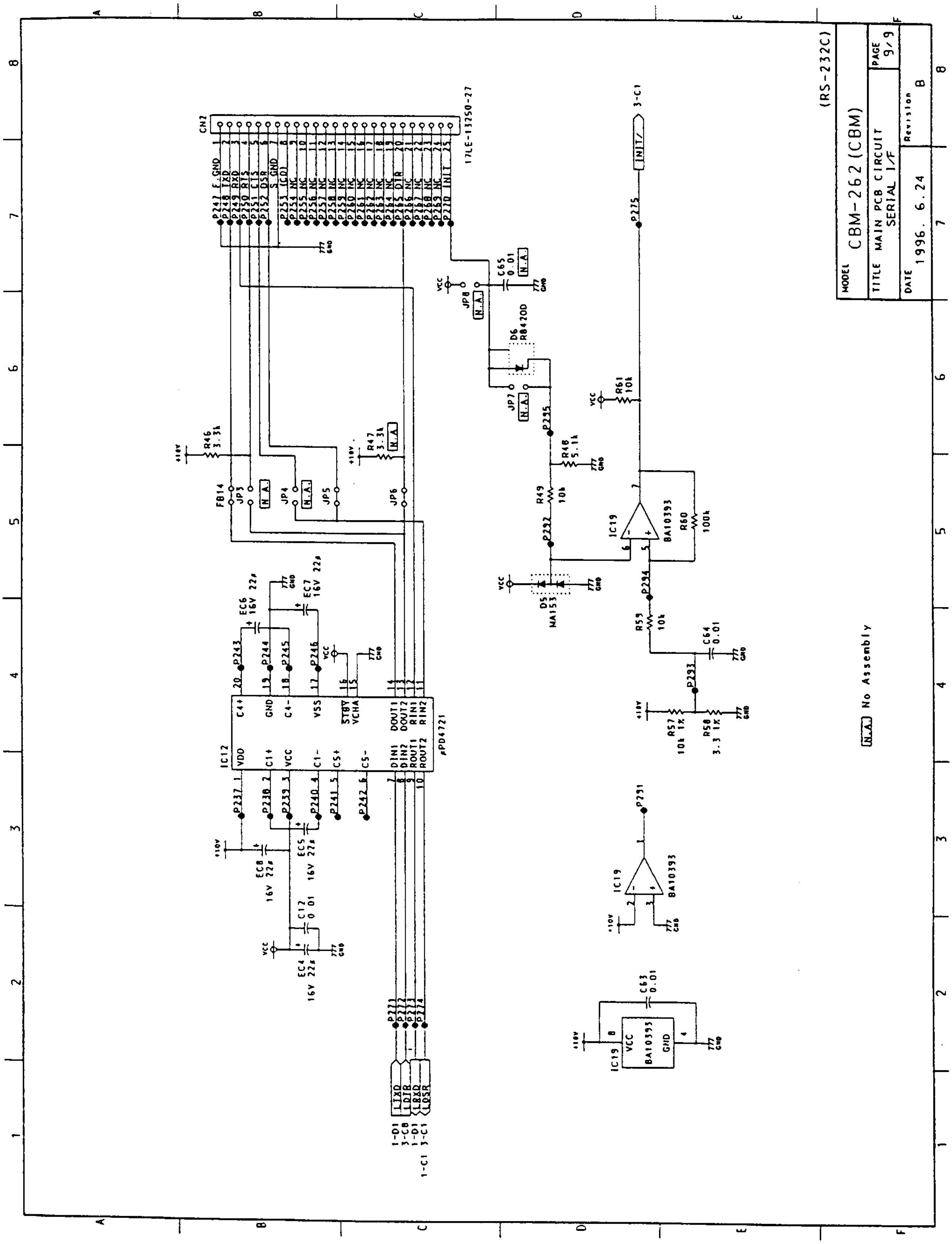
MAIN PCB (RC-232C)

● *POWER*

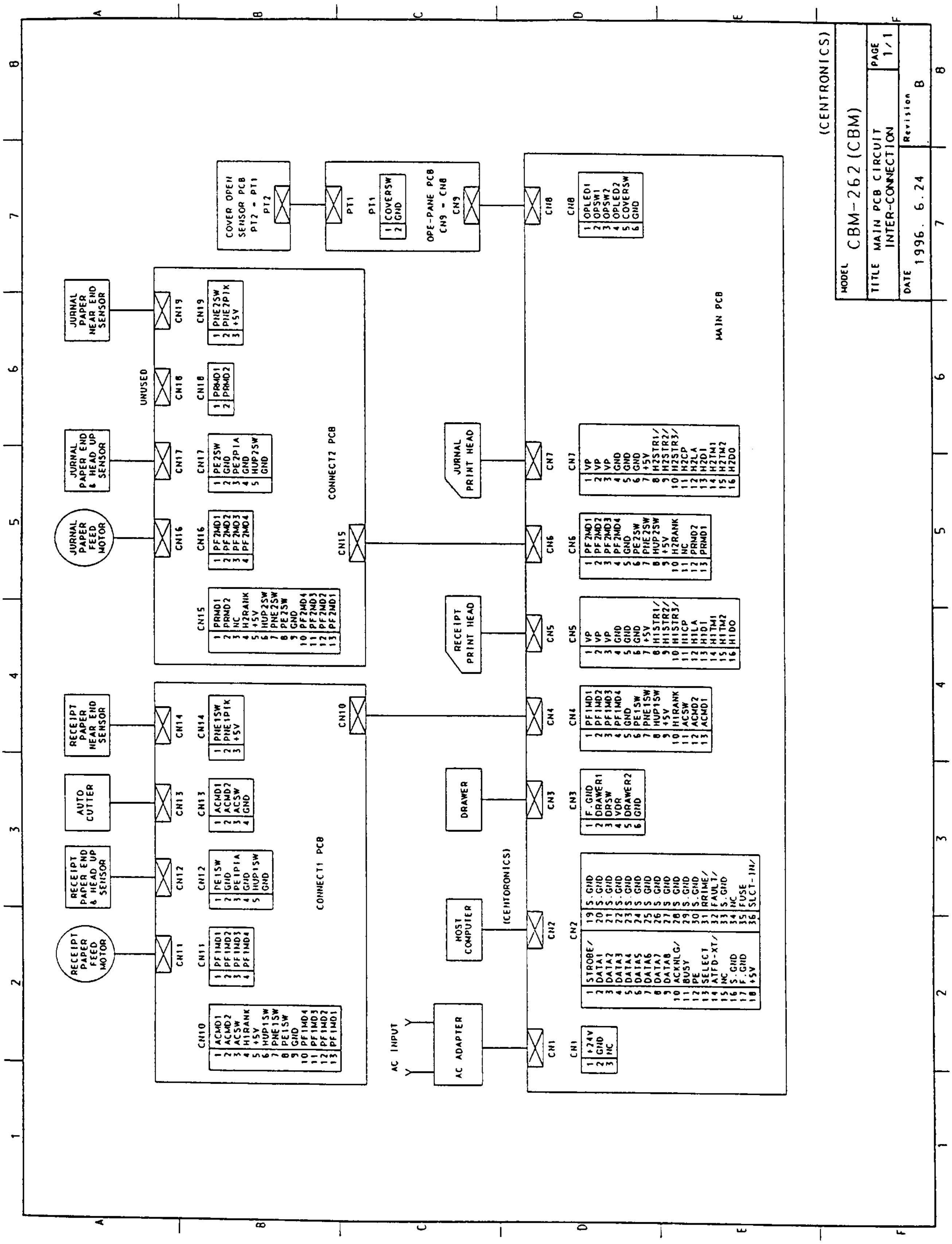


MAIN PCB (RC-232C)

● *SERIAL I/F*

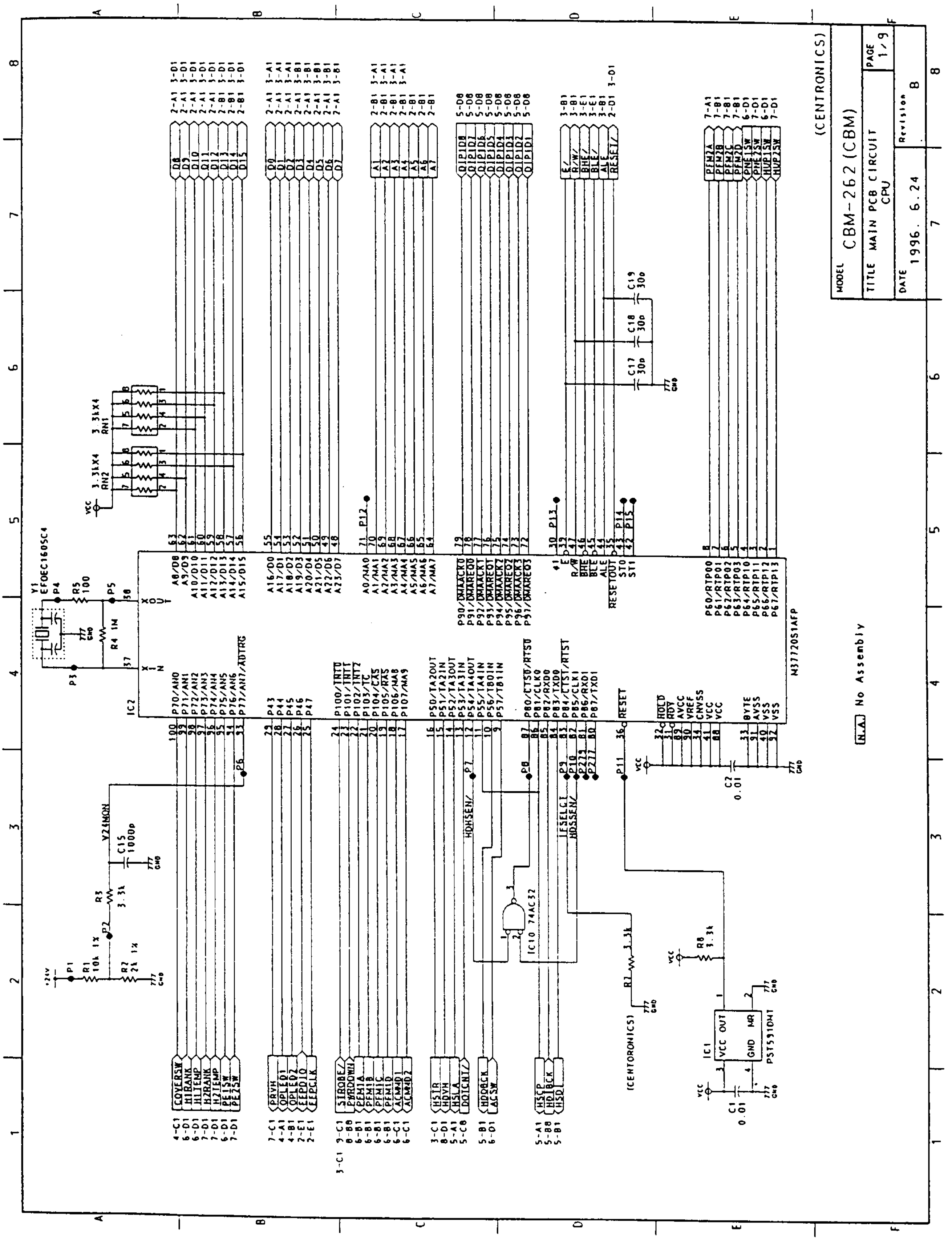


3. INTER-CONNECTION (CENTRONICS)



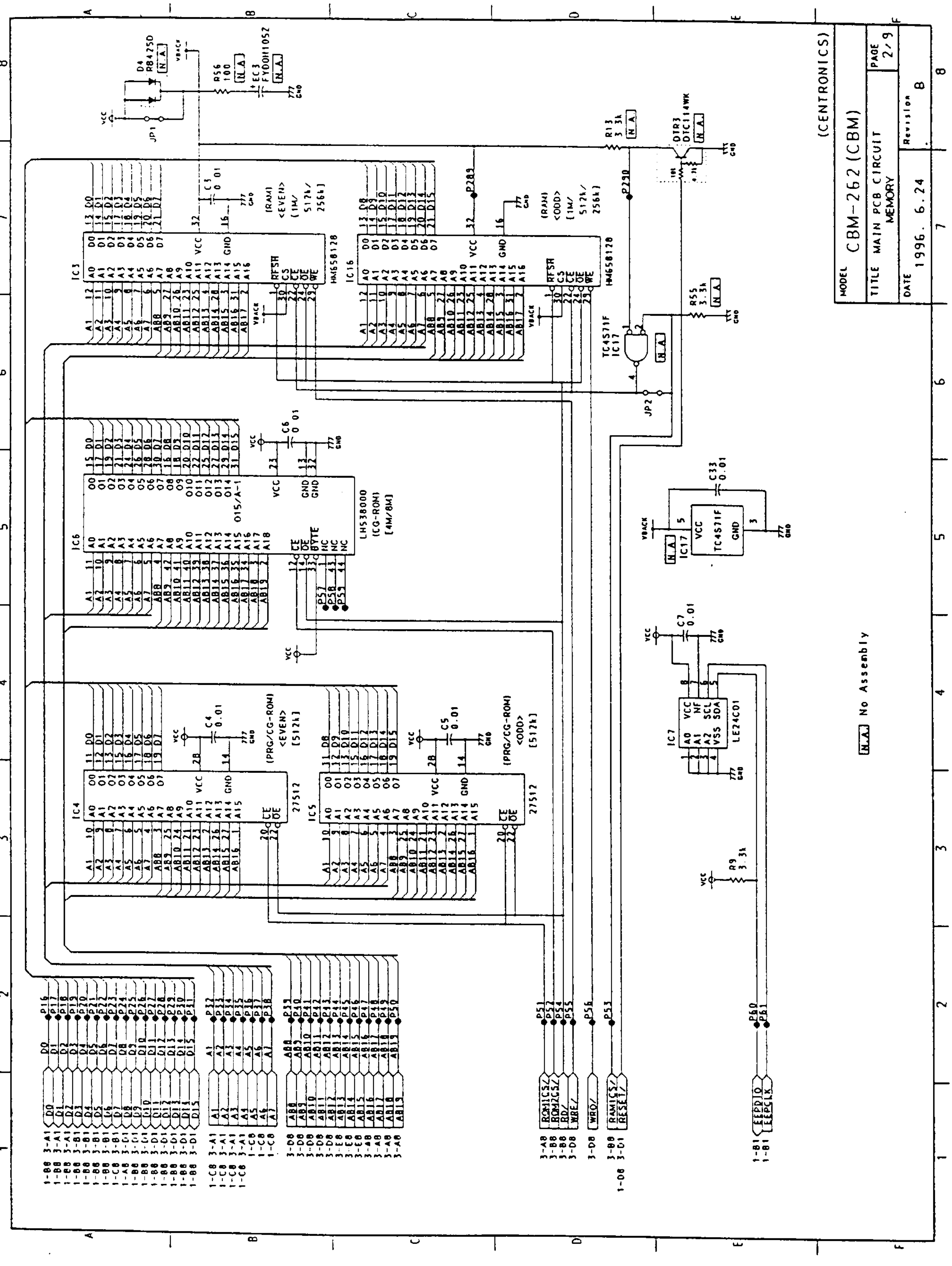
4. MAIN PCB (CENTRONICS)

● CPU



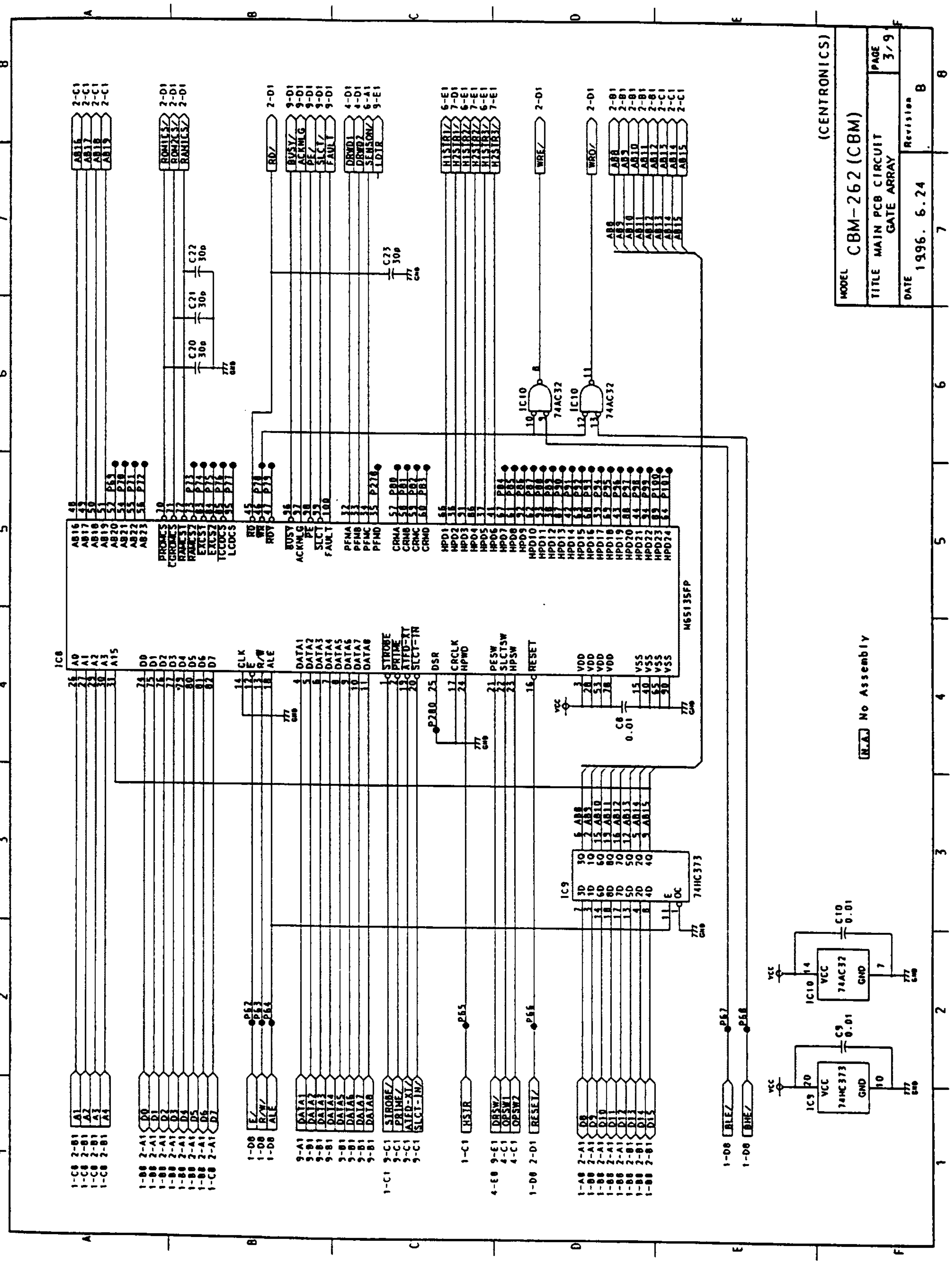
MAIN PCB (CENTRONICS)

● *MEMORY*



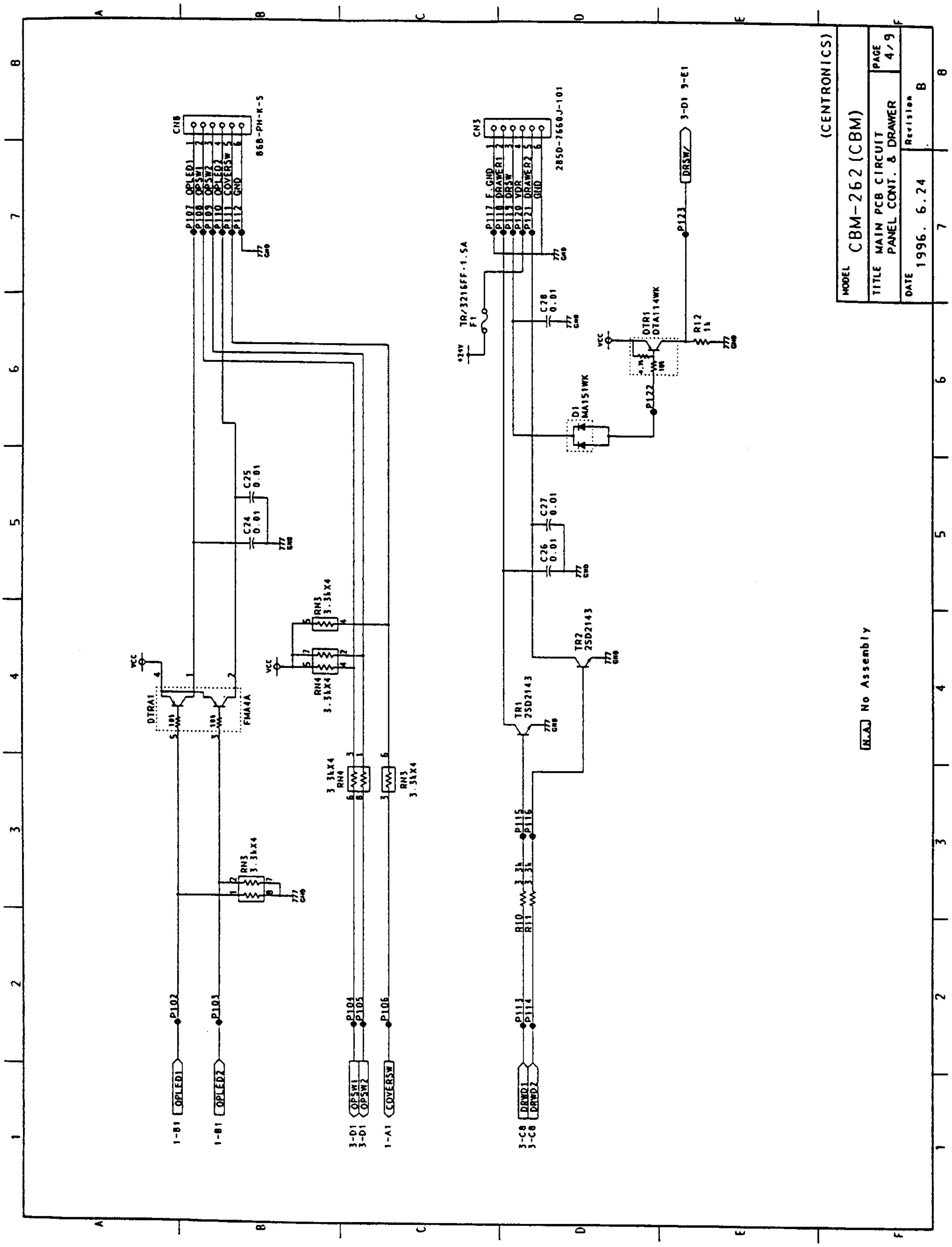
MAIN PCB (CENTRONICS)

● *GATE ARRAY*



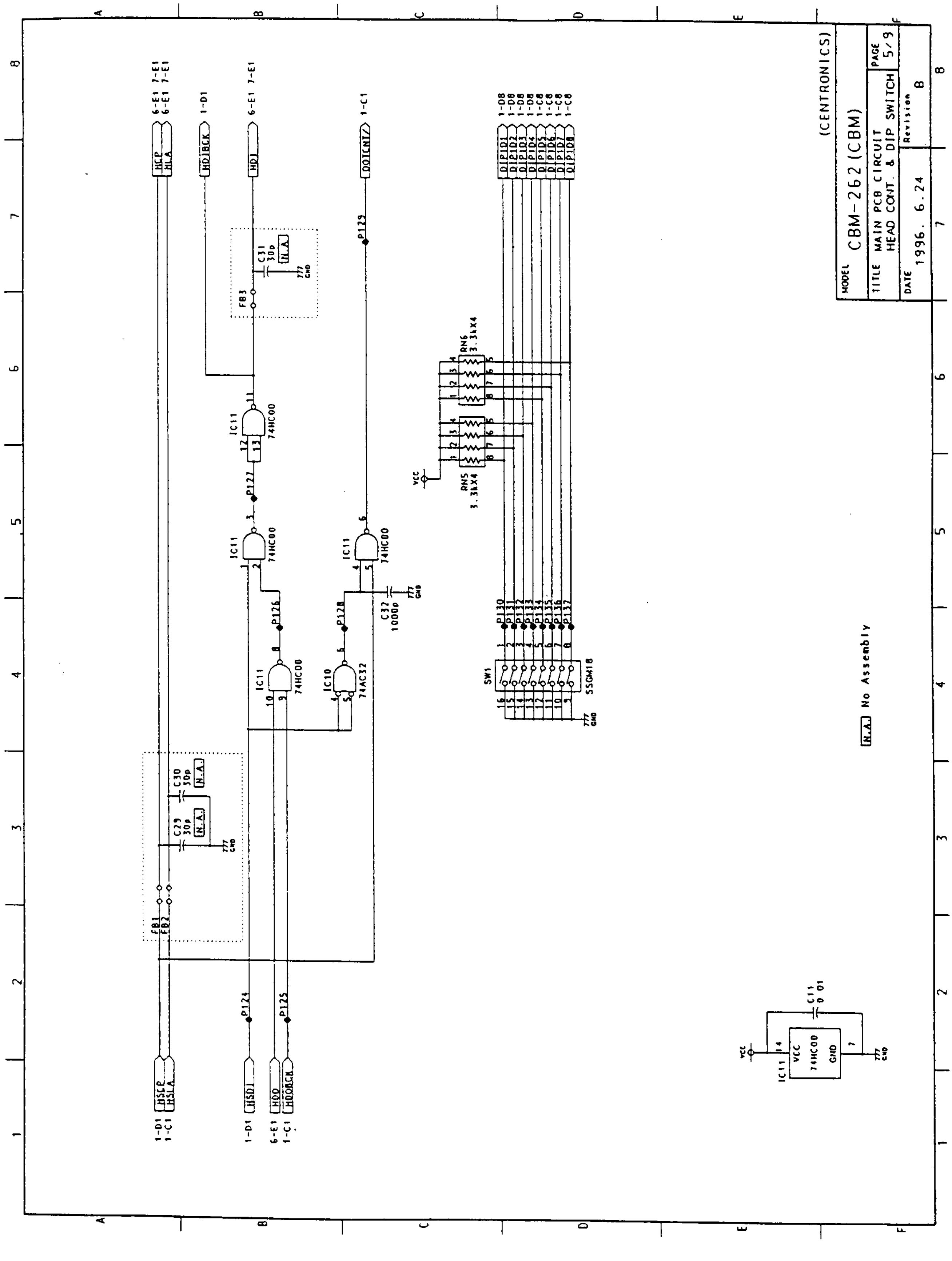
MAIN PCB (CENTRONICS)

● PANEL CONT.& DRAWER



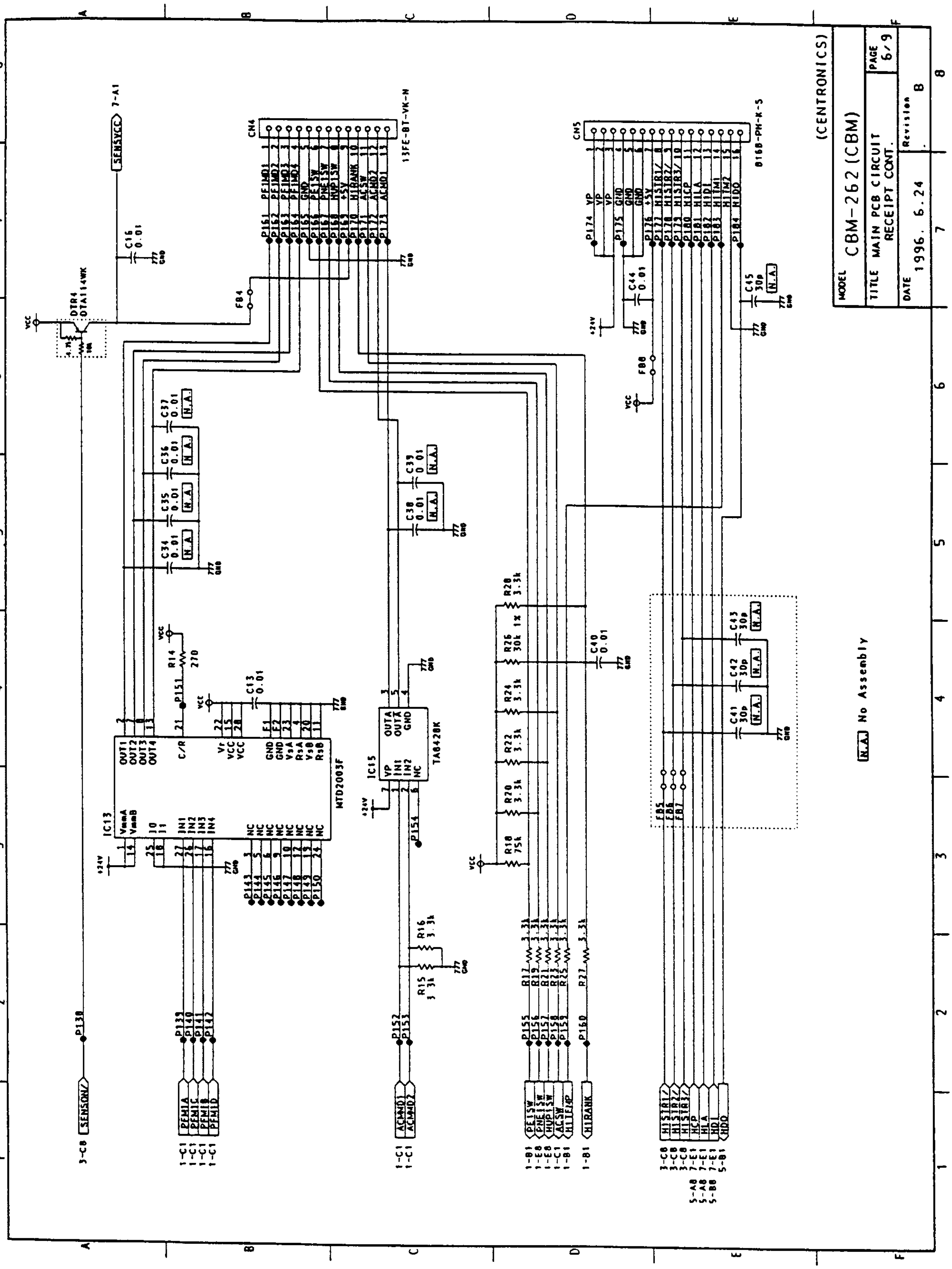
MAIN PCB (CENTRONICS)

● HEAD CONT.& DIP SWITCH



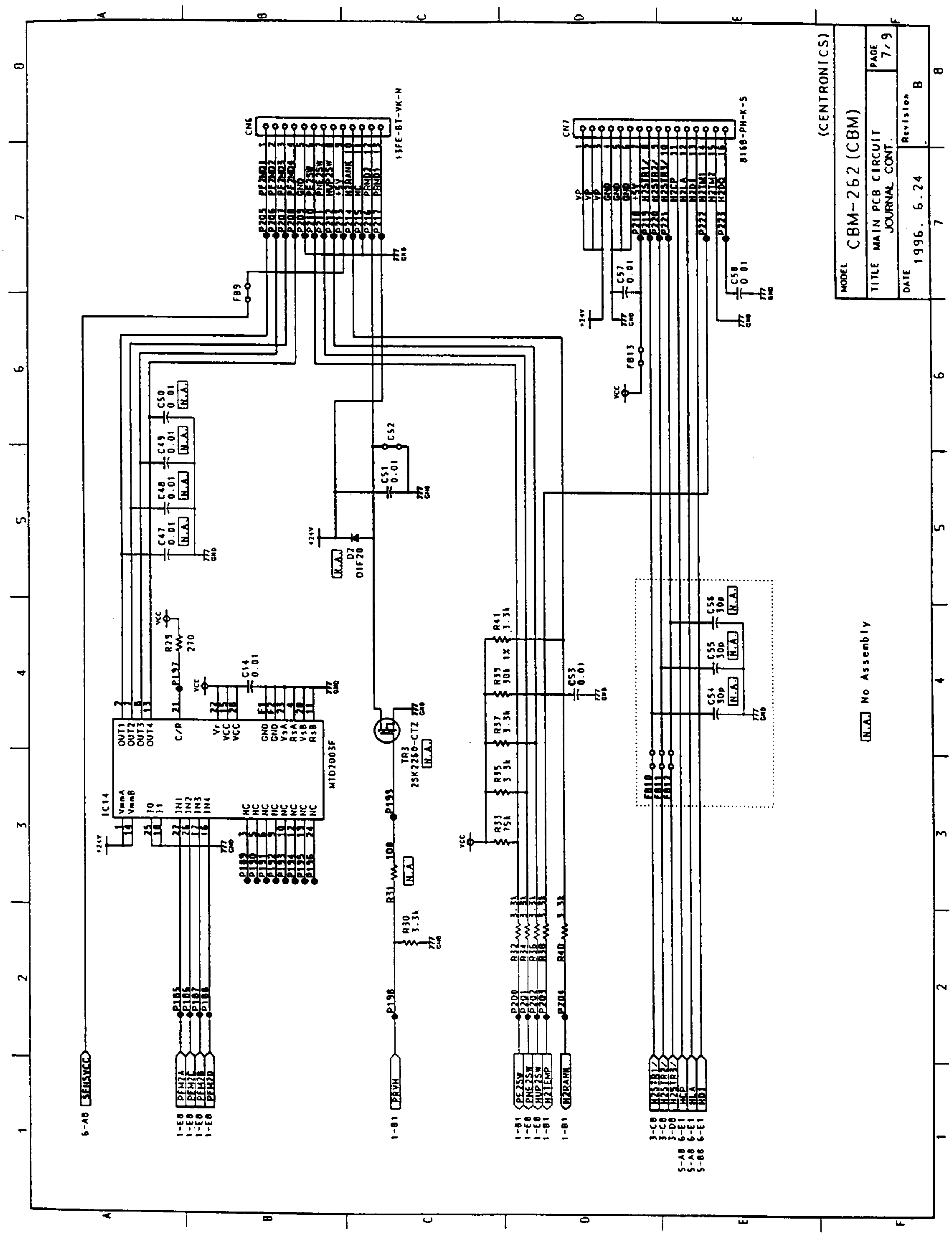
MAIN PCB (CENTRONICS)

● RECEIT CONT.



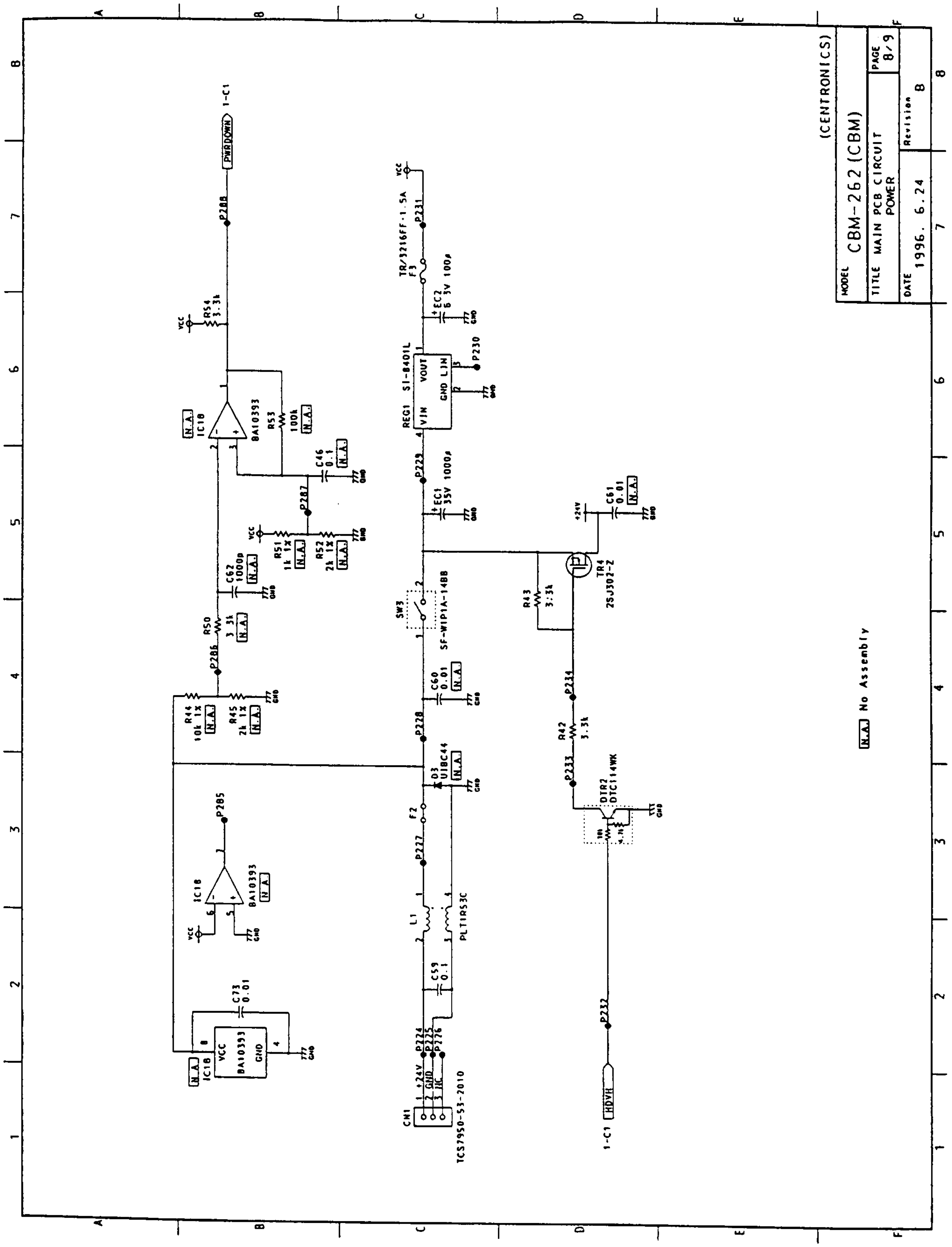
MAIN PCB (CENTRONICS)

● JOURNAL CONT.



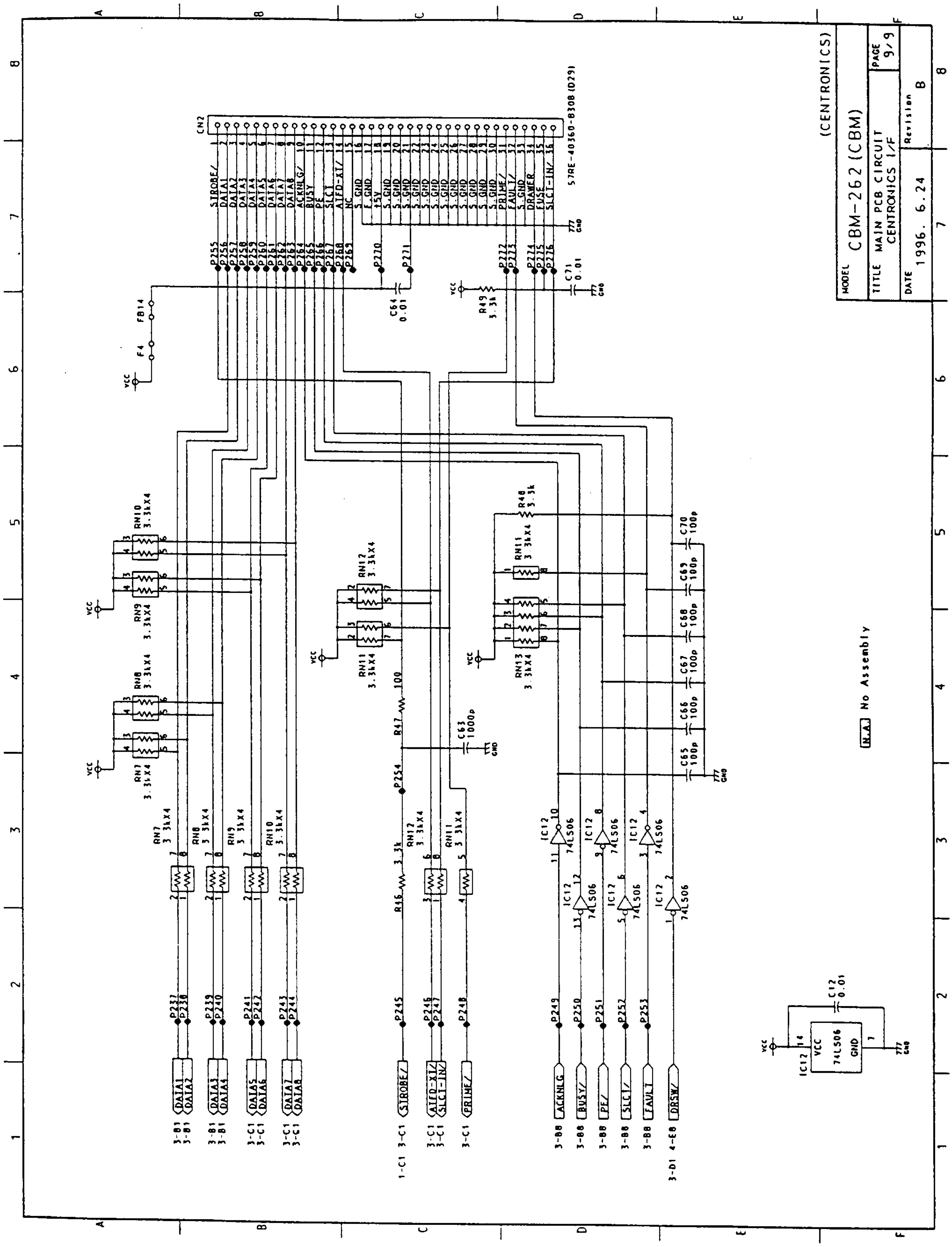
MAIN PCB (CENTRONICS)

● *POWER*

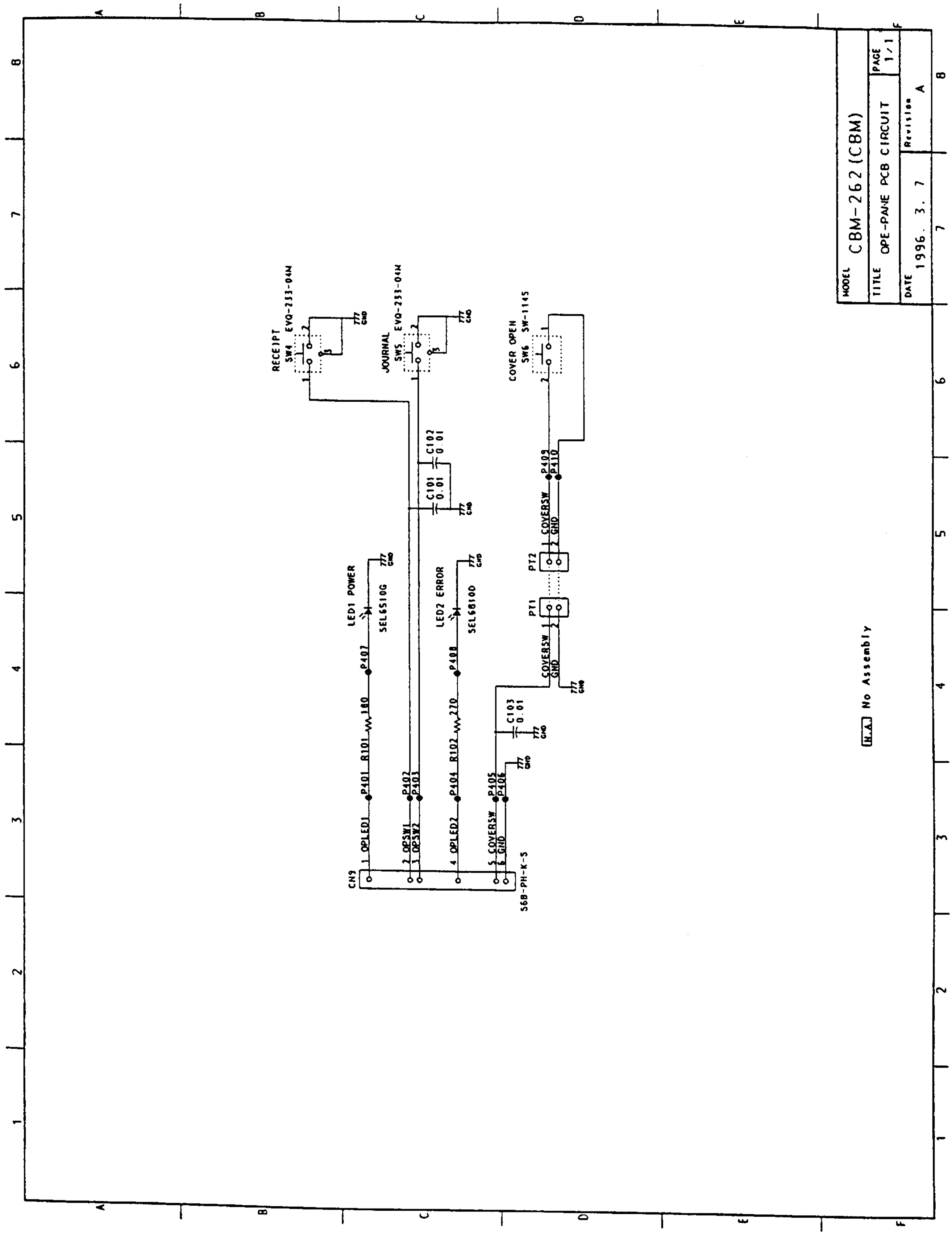


MAIN PCB (CENTRONICS)

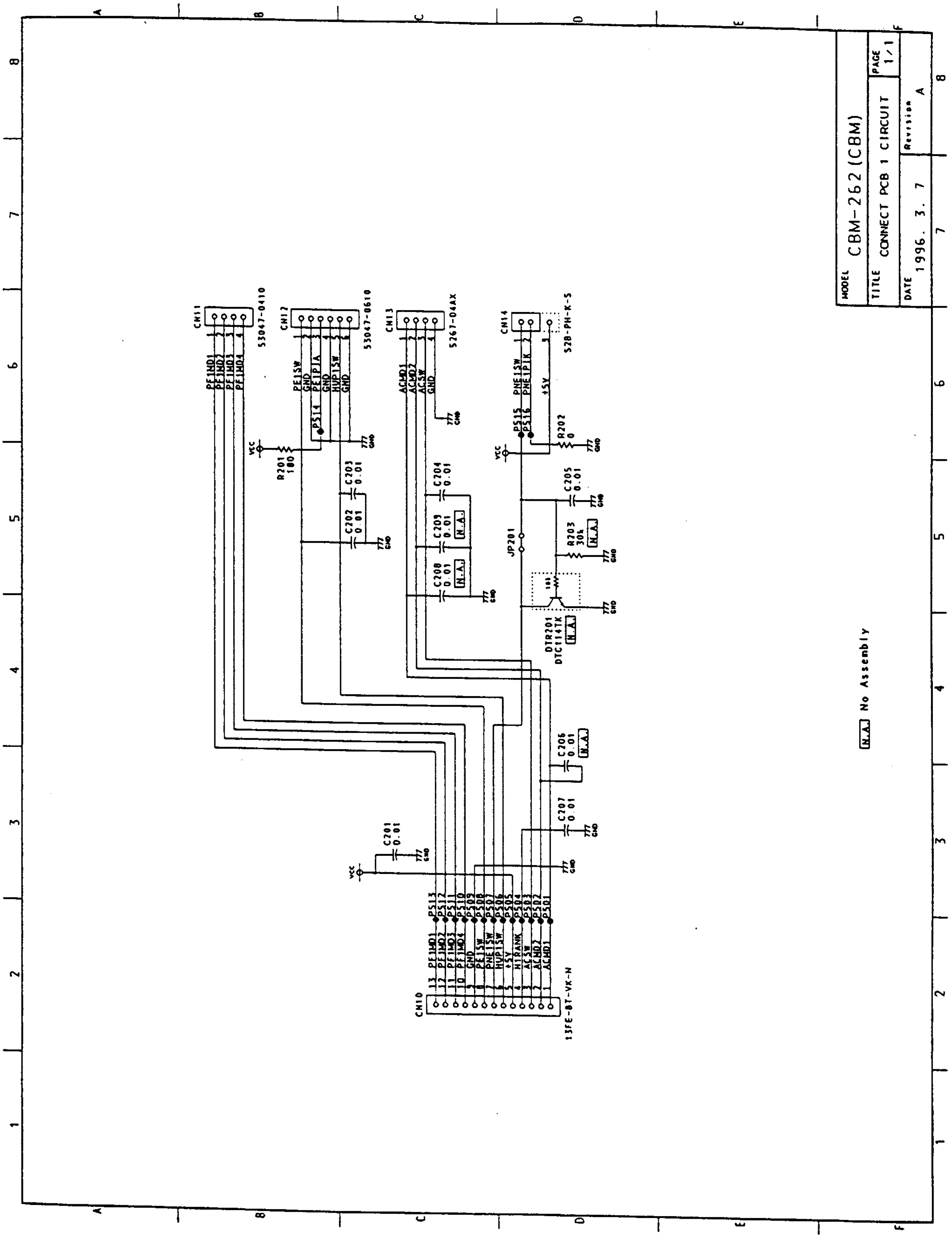
● CENTRONICS I/F



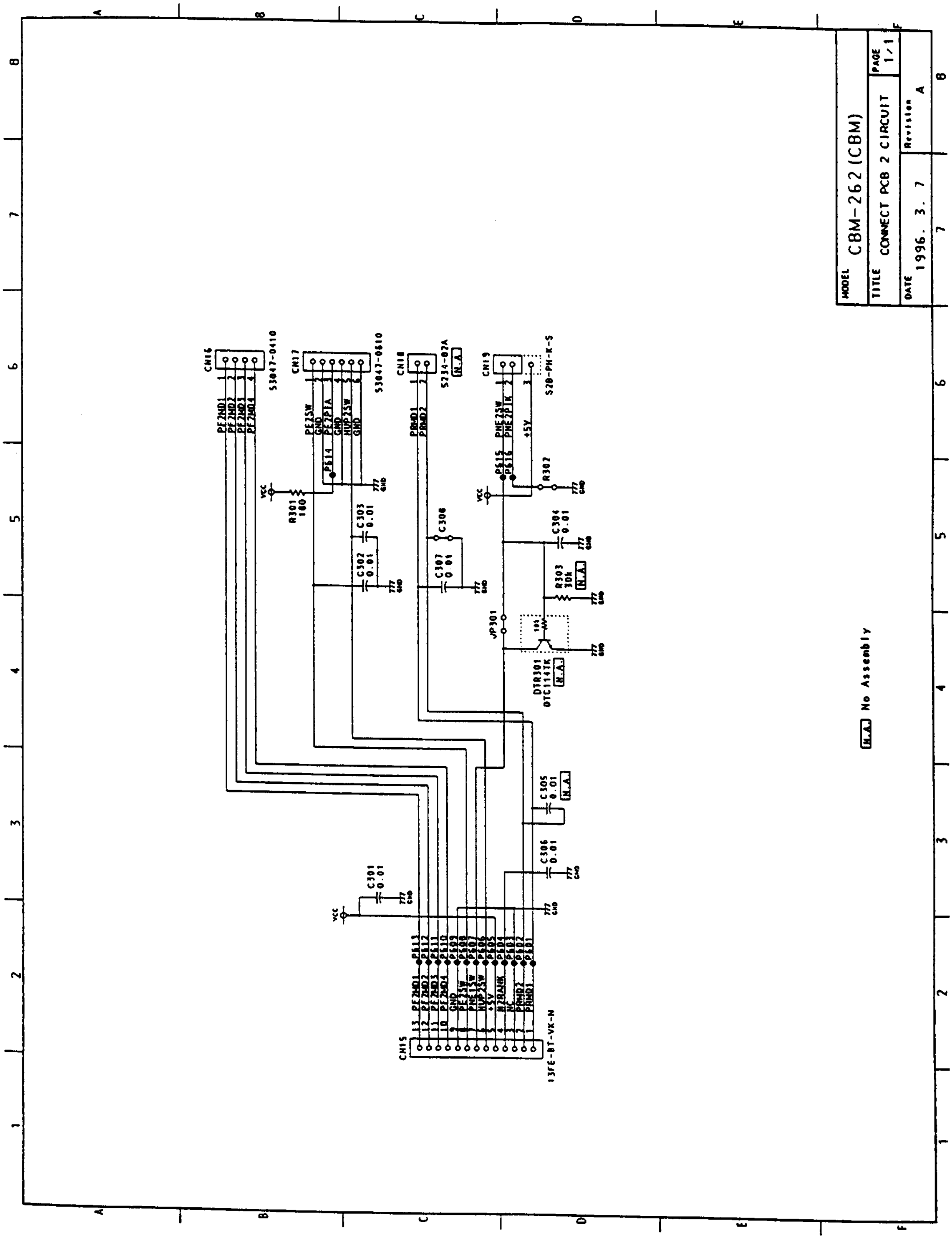
5. OPE-PANE PCB



6. CONNECT PCB 1



7. CONNECT PCB 2



CHAPTER 3

PARTS LISTS

CHAPTER 3

Parts Lists

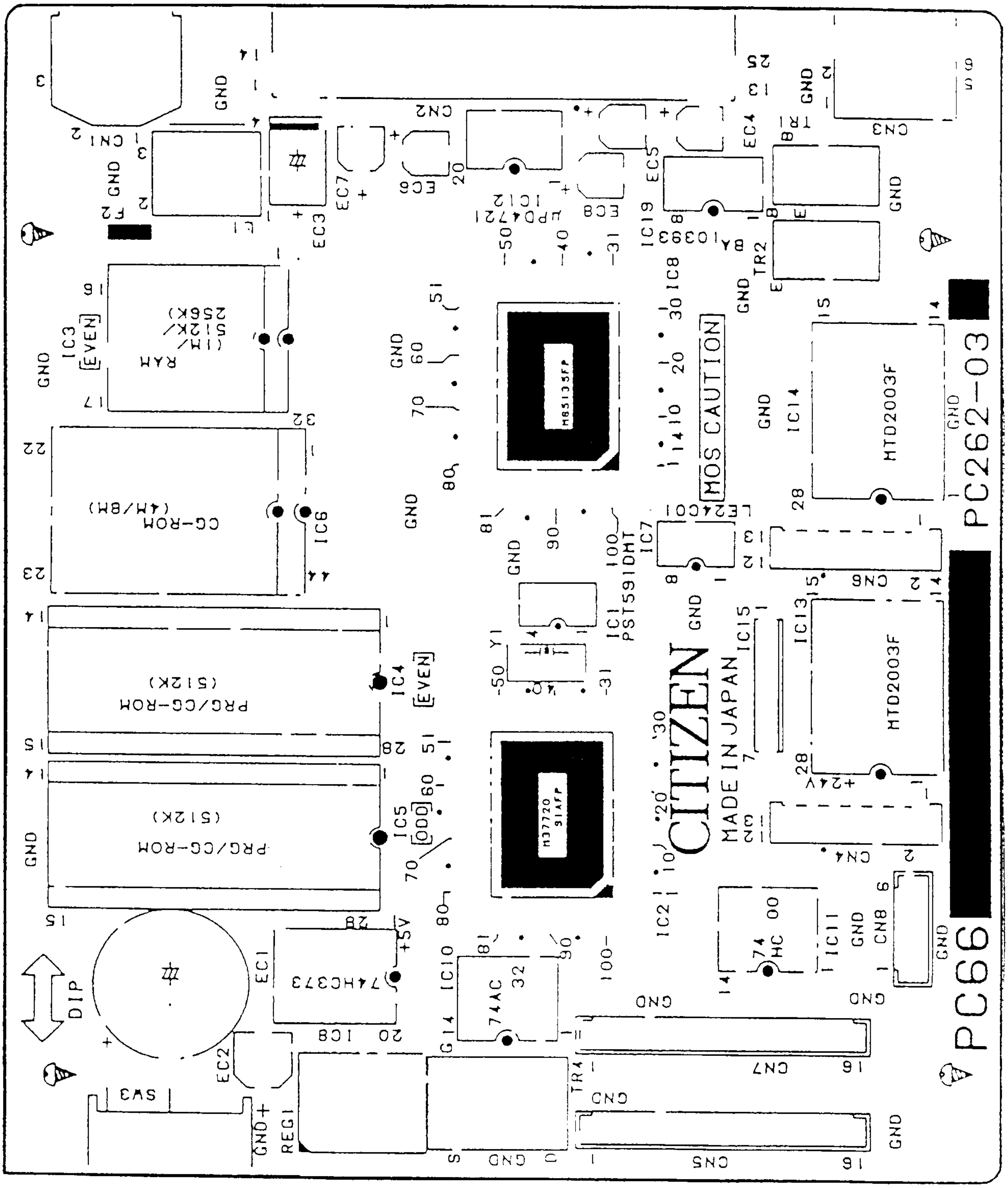
Contents

Parts List & Location for Unit, Main PCB (RS-232C)

Revision Up List		
Sheet No.	**Rev.No.**	**Date**
1/3	1	Jun.18.1996
2/3	1	Jun.18.1996
3/3	1	Jun.18.1996

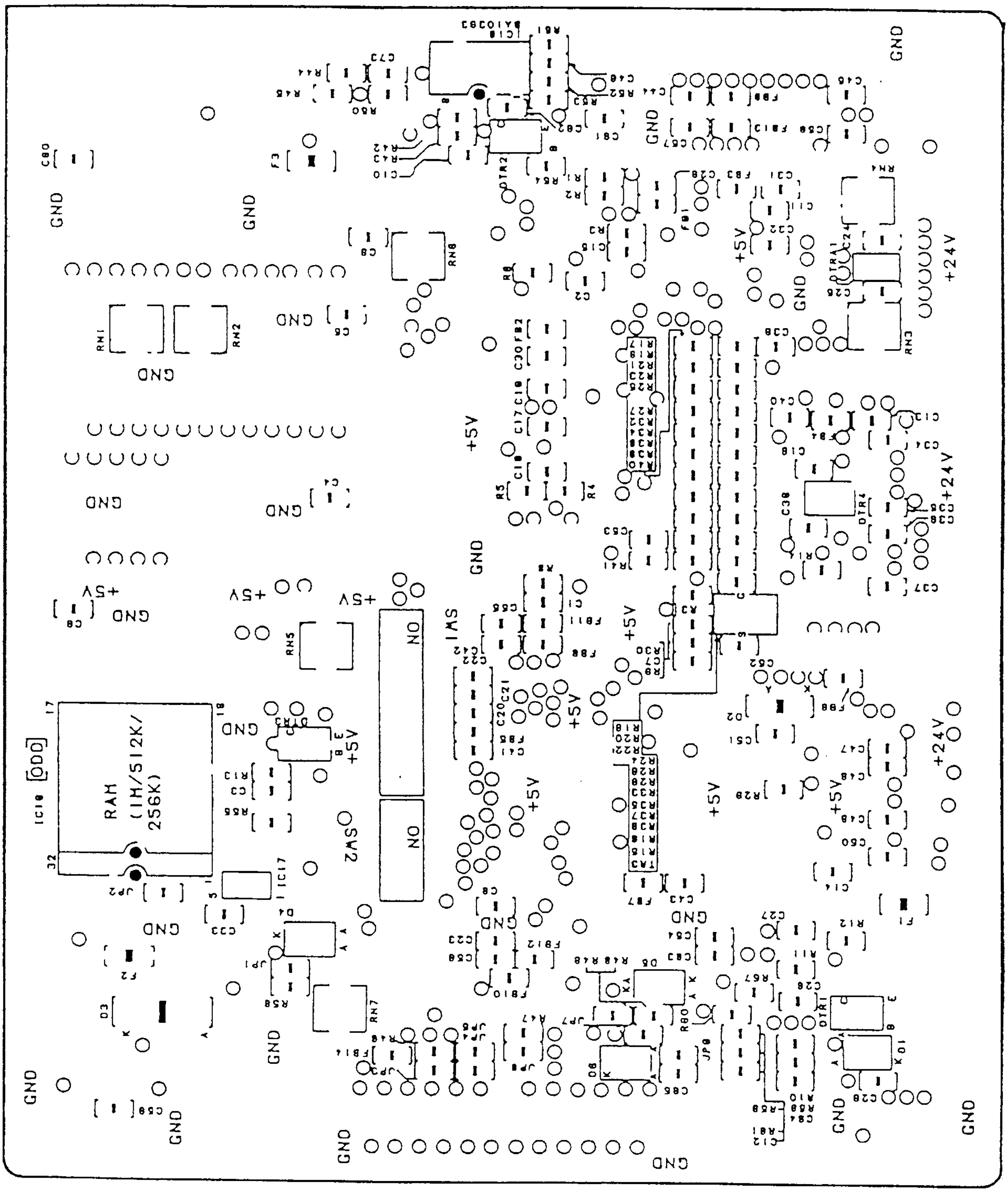
Sample layout Main PCB (RS-232C)

<Parts side>



Sample layout Main PCB (RS-232C)

<Soldered side>



Parts List for CBM-262

Unit, Main PCB (RS-232C)

Sheet No. 1/3
Rev. No. 1

Item No.	Part No.	Part Name	Type	Q'ty	Manufacturer	Location
1	PC66804-0	Unit, Main PCB(with ROM)	<for Japan>	1		
2	PC66806-0	Unit, Main PCB(with ROM)	<for USA/Europe>	1		
3	PC94702-0	ROM-Set 3(Prog.+C.G.)		1		IC4
4	C2304-615 (C2304-615) (C2304-615)	EP-ROM(Brank)	AM27C512-150 M27C512-15 MX27C512-15	1	AMD SGS-Tomson Macronix	(IC4)
5	AF99916-00	Label, ROM	K5688-411	1	Central	(IC4)
6	PC94703-0	ROM-Set 4(Prog.+C.G.)		1		IC5
7	C2304-615 (C2304-615) (C2304-615)	EP-ROM(Brank)	AM27C512-150 M27C512-15 MX27C512-15	1	AMD SGS-Tomson Macronix	(IC5)
8	AF99916-00	Label, ROM	K5688-411	1	Central	(IC5)
9	PC66704-0	SA, Main PCB(without ROM)	<for Japan>	1		
10	PC66706-0	SA, Main PCB(without ROM)	<for USA/Europe>	1		
11	C2900-052	IC(Reset)	PST591DMT	1	Mitsumi	IC1
12	C2400-009	CPU	M37720S1AFP	1	Mitsubishi	IC2
13	C2323-610 (C2323-610)	RAM(Pseudo Static)	LC33864M-10 LC33864ML-10	2	Sanyo Sanyo	IC3, 16
14	PC95900-0	Mask ROM(C.G)<for Japan>	LH5348R7	1	Sharp	IC6
15	PC95900-0	Mask ROM(C.G)<for USA/Europe>	LH5348R7	0	Sharp	IC6
16	C2320-009 (C2320-008) (C2320-010) (C2320-015) (C2320-016) (C2320-017)	EEP-ROM	LE24C01MI-TE-L 24C01A-/SN ST24C01M1 AT24C01A-10SC BR24C01AF XL24C01AF	1	Sanyo Microchip SGS-Thomson Atmel Rohm Exel	IC7
17	C2527-402	Gate Array	M6513FP	1	Mitsubishi	IC8
18	C2216-373	IC(CMOS)	HD74HC373FP	1	Hitachi	IC9
19	C2262-032	IC(CMOS)	HD74AC32FP	1	Hitachi	IC10
20	C2216-000	IC(CMOS)	HD74HC00FP	1	Hitachi	IC11
21	C2900-057	IC(I/F)	µPD4721	1	NEC	IC12
22	C2709-001	IC(Drive)	MTD2003F	2	Shindengen	IC13,14
23	C2703-428	IC(Drive)	TA8428K	1	Toshiba	IC15
24	C2603-393 (C2603-393) (C2603-393) (C2603-393) (C2603-393)	IC(Comparator)	BA10393F LM393PS LM393D LM393M LM393M	1	Rohm T.I. Motorola Motorola N.S.	IC19
25	C3402-143	Transistor	2SD2143	2	Rohm	TR1,2
26	C3903-046	Transistor	2SJ302-Z	1	NEC	TR4

Parts List for CBM-262

Unit, Main PCB (RS-232C)

Sheet No. 2/3
Rev. No. 1

Item No.	Part No.	Part Name	Type	Q'ty	Manufacturer	Location
1	C3905-015	Transistor(Res.)	FMA4A	1	Rohm	DTRA1
2	C3905-006	Transistor(Res.)	DTA114WK	2	Rohm	DTR1,4
3	C3905-014	Transistor(Res.)	DTC114WK	1	Rohm	DTR2
4	C3621-001 (C3621-002) (C3621-000) (C3621-003)	Diode(Silicon)	MA151WK MA152WK DAN202K DCB010	1	Matsushita Matsushita Rohm Sanyo	D1
5	C3629-000	Diode(Silicon)	MA153	1	Matsushita	D5
6	C3610-044	Diode(Silicon)	RB420D	1	Rohm	D6
7	C7425-166	Oscillator(Ceramic)	EFOEC1605C4	1	Matsushita	Y1
8	C6180-093	Connector	TCS7960-53-2010	1	Hoshiden	CN1
9	C6149-142	Connector	17LE-13250-27(D41)	1	DDK	CN2
10	C6149-143	Connector	285D-7660J-101	1	DDK	CN3
11	C6198-713	Connector	13FE-BT-VK-N	2	JST	CN4,6
12	C6196-716	Connector	B16B-PH-K-S	2	JST	CN5,7
13	C6196-706	Connector	B6B-PH-K-S	1	JST	CN8
14	C7100-128	IC Socket	DILB28P-8J	2	Burndy	IC4,5
15	C7219-020	Switch(Dip)	SSGM18	1	Alps	SW1
16	C7219-021	Switch(Dip)	SSGM14	1	Alps	SW2
17	C7602-104	Switch(Power)	SF-W1P1A-14BB	1	Echo Elec.	SW3
18	C5270-053	Cap.Chip	B,±10%,50V,0.01μF	30		C1~14,16,24~28,33,40,44 51,53,57,58,63,64,73
19	C5270-051	Cap.Chip	CH,±5%,50V,1000pF	2		C15,32
20	C5270-044	Cap.Chip	CH,±5%,50V,30pF	7		C17~23
21	C5270-170	Cap.Chip	F,±5%,50V,0.1μF	1		C59
22	C5190-474	Cap.Electrolytic	35WA1000Mϕ16×L16	1	Rubycon	EC1
23	C5190-475	Cap.Electrolytic	6.3REV100Mϕ6.3×L5.5	1	Rubycon	EC2
24	C5190-476	Cap.Electrolytic	16REV22Mϕ5×L5.5	5	Rubycon	EC4~8
25	C2800-046	IC(Regulator)	SI-8401L	1	Sanken	REG1
26	C7302-365	Microton Fuse	TR/3216FF·1.5A	2	Bussmann	F1,3
27	C7510-090	Coil	PLT1R53C	1	Murata	L1
28	C4932-035	Res.Chip	1/10W,±1%,10KΩ	2		R1,57
29	C4932-052	Res.Chip	1/10W,±5%,2KΩ	1		R2
30	C4922-332	Res.Chip	1/10W,±5%,3.3KΩ	31		R3,6,8~11,15~17,19~25 27,28,30,32,34~38,40~43 46,54
31	C4922-105	Res.Chip	1/10W,±5%,1MΩ	1		R4
32	C4922-101	Res.Chip	1/10W,±5%,100Ω	1		R5
33	C4922-102	Res.Chip	1/10W,±5%,1KΩ	1		R12
34	C4922-271	Res.Chip	1/10W,±5%,270Ω	2		R14,29

Parts List for CBM-262

Unit, Main PCB (RS-232C)

Sheet No. 3/3
Rev. No. 1

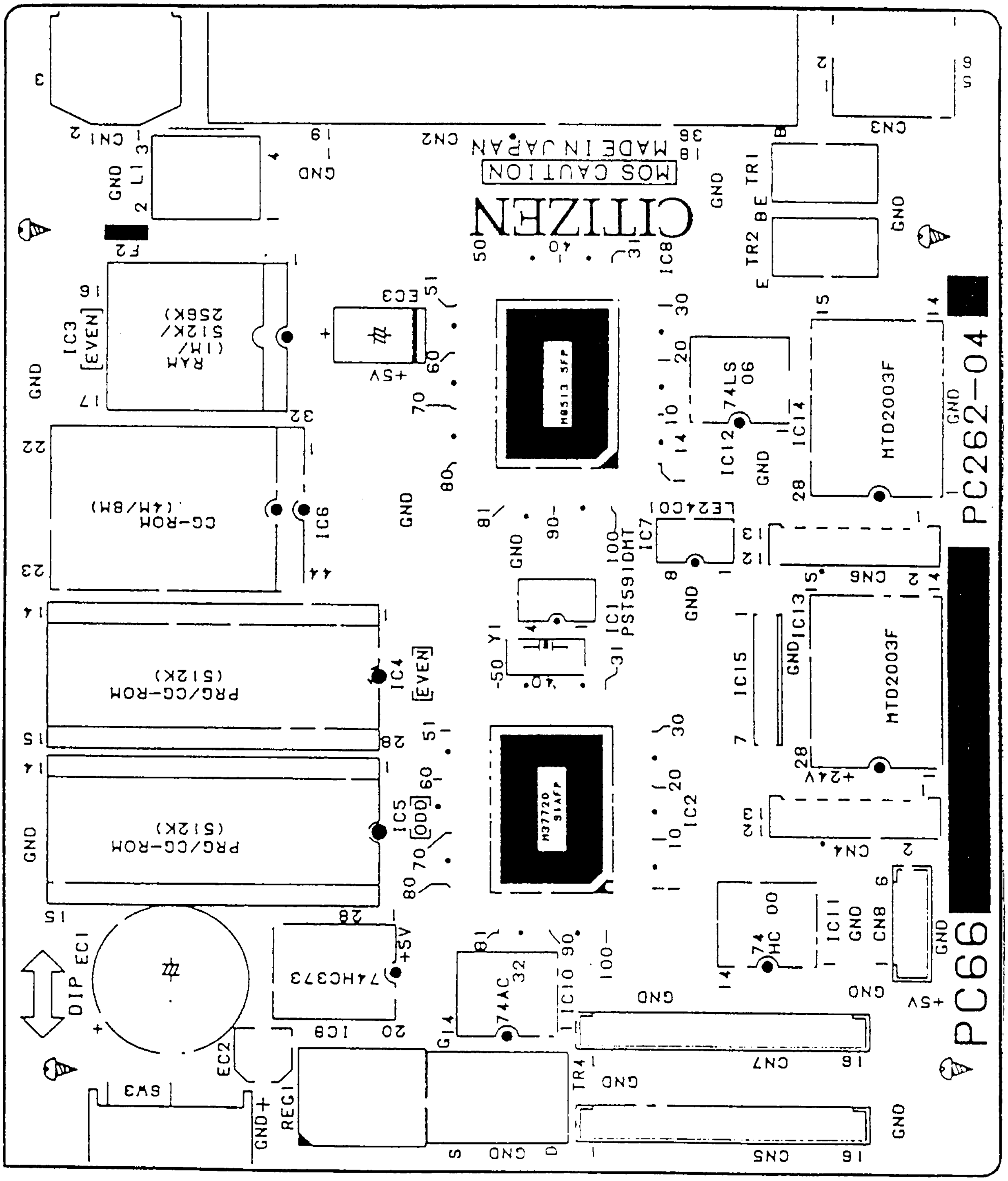
Item No.	Part No.	Part Name	Type	Q'ty	Manufacturer	Location
1	C4922-753	Res.Chip	1/10W,±5%,75KΩ	2		R18,33
2	C4932-063	Res.Chip	1/10W,±1%,30KΩ	2		R26,39
3	C4922-512	Res.Chip	1/10W,±5%,5.1KΩ	1		R48
4	C4922-103	Res.Chip	1/10W,±5%,10KΩ	3		R49,59,61
5	C4932-016	Res.Chip	1/10W,±1%,3.3KΩ	1		R58
6	C4922-104	Res.Chip	1/10W,±5%,100KΩ	1		R60
7	C4922-000	Res.Chip	1/10W,0Ω(Jumper)	19		C52,FB1~14,JP1,2,5,6
8	C4920-000	Res.Chip	1/8W,0Ω(Jumper)	1		F2
9	C4494-002	Res.Array(Chip)	EXBS8V332J	7	Matsushita	RN1~7

Parts List & Location for Unit, Main PCB (Centronics)

Revision Up List		
Sheet No.	**Rev.No.**	**Date**
1/2	1	Jun.18.1996
2/2	1	Jun.18.1996

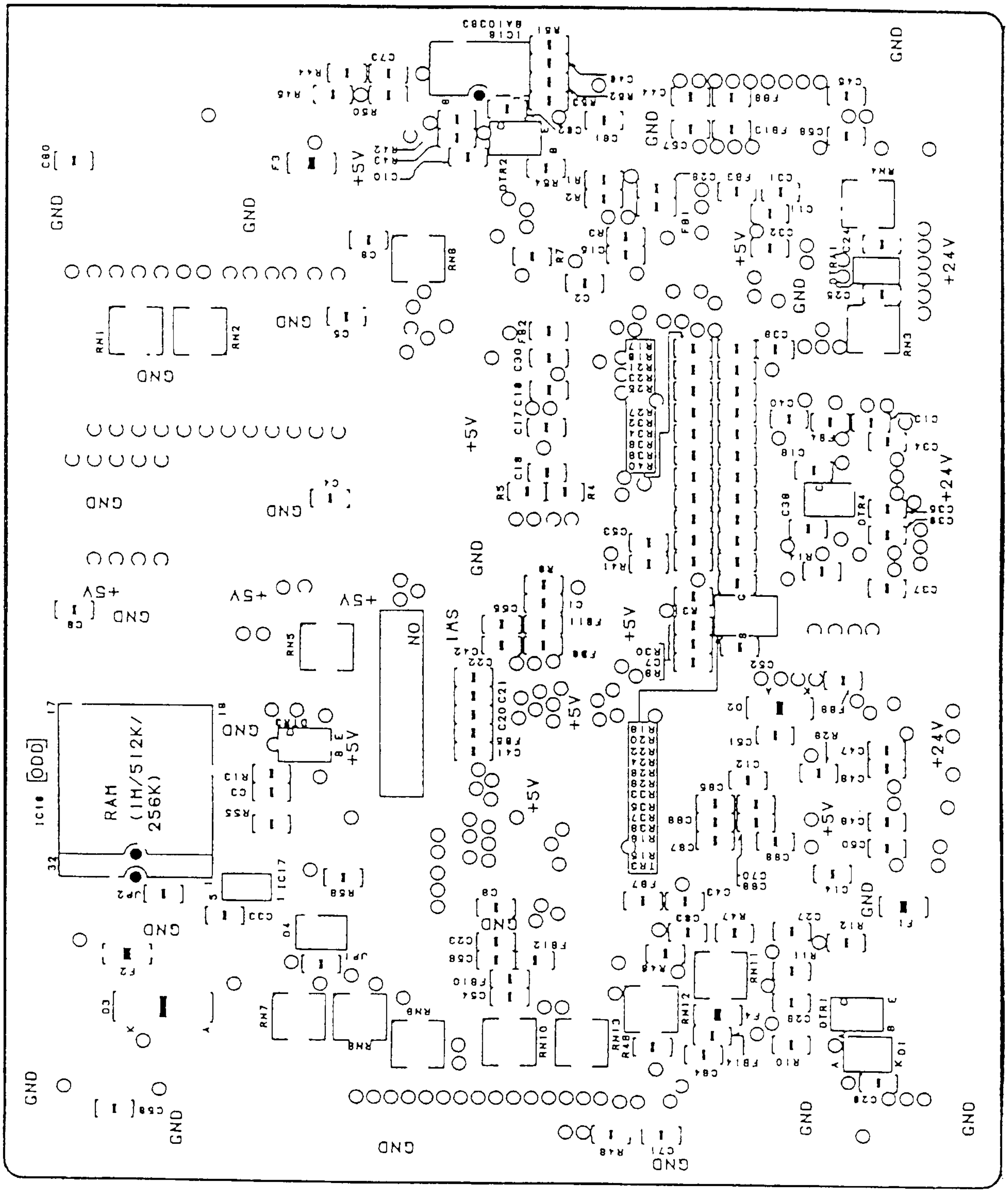
Sample layout Main PCB (Centronics)

<Parts side>



Sample layout Main PCB (Centronics)

<Soldered side>



Parts List for CBM-262

Unit, Main PCB (Centronics)

Sheet No. 1/2
Rev. No. 1

Item No.	Part No.	Part Name	Type	Q'ty	Manufacturer	Location
1	PC66805-0	Unit, Main PCB(with ROM)	<for Japan>	1		
2	PC66807-0	Unit, Main PCB(with ROM)	<for USA/Europe>	1		
3	PC94702-0	ROM-Set 3(Prog.+C.G.)		1		IC4
4	C2304-615 (C2304-615) (C2304-615)	EP-ROM(Brank)	AM27C512-150 M27C512-15 MX27C512-15	1	AMD SGS-Tomson Macronix	(IC4)
5	AF99916-00	Label, ROM	K5688-411	1	Central	(IC4)
6	PC94703-0	ROM-Set 4(Prog.+C.G.)		1		IC5
7	C2304-615 (C2304-615) (C2304-615)	EP-ROM(Brank)	AM27C512-150 M27C512-15 MX27C512-15	1	AMD SGS-Tomson Macronix	(IC5)
8	AF99916-00	Label, ROM	K5688-411	1	Central	(IC5)
9	PC66705-0	SA, Main PCB(without ROM)	<for Japan>	1		
10	PC66707-0	SA, Main PCB(without ROM)	<for USA/Europe>	1		
11	C2900-052	IC(Reset)	PST591DMT	1	Mitsumi	IC1
12	C2400-009	CPU	M37720S1AFP	1	Mitsubishi	IC2
13	C2323-610 (C2323-610)	RAM(Pseudo Static)	LC33864M-10 LC33864ML-10	2	Sanyo Sanyo	IC3, 16
14	PC95900-0	Mask ROM(C.G)<for Japan>	LH5348R7	1	Sharp	IC6
15	PC95900-0	Mask ROM(C.G)<for USA/Europe>	LH5348R7	0	Sharp	IC6
16	C2320-009 (C2320-008) (C2320-010) (C2320-015) (C2320-016) (C2320-017)	EEP-ROM	LE24C01M1-TE-L 24C01A-/SN ST24C01M1 AT24C01A-10SC BR24C01AF XL24C01AF	1	Sanyo Microchip SGS-Tomson Atmel Rohm Exel	IC7
17	C2527-402	Gate Array	M65135FP	1	Mitsubishi	IC8
18	C2216-373	IC(CMOS)	HD74HC373FP	1	Hitachi	IC9
19	C2262-032	IC(CMOS)	HD74AC32FP	1	Hitachi	IC10
20	C2216-000	IC(CMOS)	HD74HC00FP	1	Hitachi	IC11
21	C2108-006	IC(TTL)	HD74LS06FP	1	Hitachi	IC12
22	C2709-001	IC(Drive)	MTD2003F	2	Shindengen	IC13,14
23	C2703-428	IC(Drive)	TA8428K	1	Toshiba	IC15
24	C3402-143	Transistor	2SD2143	2	Rohm	TR1,2
25	C3903-046	Transistor	2SJ302-Z	1	NEC	TR4
26	C3905-015	Transistor(Res.)	FMA4A	1	Rohm	DTRA1
27	C3905-006	Transistor(Res.)	DTA114WK	2	Rohm	DTR1,4
28	C3905-014	Transistor(Res.)	DTA114WK	1	Rohm	DTR2
29	C7425-166	Oscillator(Ceramic)	EFOEC1605C4	1	Matsushita	Y1

Parts List for CBM-262

Unit, Main PCB (Centronics)

Sheet No. 2/2
Rev. No. 1

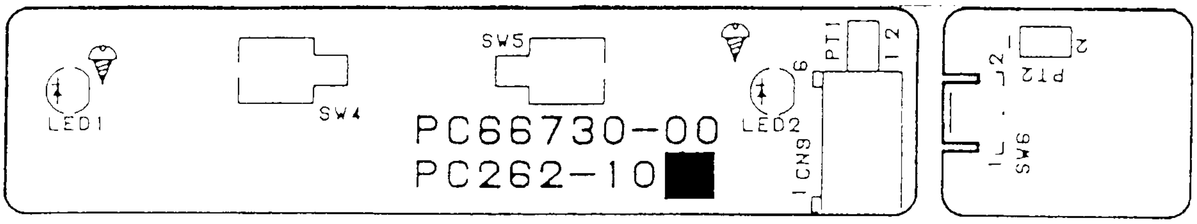
Item No.	Part No.	Part Name	Type	Q'ty	Manufacturer	Location
1	C3621-001 (C3621-002) (C3621-000) (C3621-003)	Diode(Silicon)	MA151WK MA152WK DAN202K DCB010	1	Matsushita Matsushita Rohm Sanyo	D1
2	C6180-093	Connector	TCS7960-53-2010	1	Hoshiden	CN1
3	C6149-145	Connector	57RE-40360-830B(D29)	1	DDK	CN2
4	C6149-143	Connector	285D-7660J-101	1	DDK	CN3
5	C6198-713	Connector	13FE-BT-VK-N	2	JST	CN4,6
6	C6196-716	Connector	B16B-PH-K-S	2	JST	CN5,7
7	C6196-706	Connector	B6B-PH-K-S	1	JST	CN8
8	C7100-128	IC Socket	DILB28P-8J	2	Burndy	IC4,5
9	C7219-020	Switch(Dip)	SSGM18	1	Alps	SW1
10	C7602-104	Switch(Power)	SF-W1P1A-14BB	1	Echo Elec.	SW3
11	C5270-053	Cap.Chip	B,±0%,50V,0.01μF	30		C1~14,16,24~28,33,40,44 51,53,57,58,64,71,73
12	C5270-051	Cap.Chip	CH,±5%,50V,1000pF	3		C15,32,63
13	C5270-044	Cap.Chip	CH,±5%,50V,30pF	7		C17~23
14	C5270-170	Cap.Chip	F,±5%,50V,0.1μF	1		C59
15	C5270-121	Cap.Chip	CH,±5%,50V,100pF	6		C65~70
16	C5190-474	Cap.Electrolytic	35WA1000Mϕ16×L16	1	Rubycon	EC1
17	C5190-475	Cap.Electrolytic	6.3REV100Mϕ6.3×L5.5	1	Rubycon	EC2
18	C2800-046	IC(Regulator)	SI-8401L	1	Sanken	REG1
19	C7302-365	Microton Fuse	TR/3216FF·1.5A	2	Bussmann	F1,3
20	C7510-090	Coil	PLT1R53C	1	Murata	L1
21	C4932-035	Res.Chip	1/10W,±1%,10KΩ	1		R1
22	C4932-052	Res.Chip	1/10W,±1%,2KΩ	1		R2
23	C4922-105	Res.Chip	1/10W,±5%,1MΩ	1		R4
24	C4922-332	Res.Chip	1/10W,±5%,3.3KΩ	33		R3,7~11,15~17,19~25,27 28,30,32,34~38,40~43,46 48,49,54
25	C4922-101	Res.Chip	1/10W,±5%,100Ω	2		R5,47
26	C4922-102	Res.Chip	1/10W,±5%,1KΩ	1		R12
27	C4922-271	Res.Chip	1/10W,±5%,270Ω	2		R14,29
28	C4922-753	Res.Chip	1/10W,±5%,75KΩ	2		R18,33
29	C4932-063	Res.Chip	1/10W,±1%,30KΩ	2		R26,39
30	C4922-000	Res.Chip	1/10W,0Ω(Jumper)	17		C52,FB1~14,JP1,2
31	C4920-000	Res.Chip	1/8W,0Ω(Jumper)	2		F2,4
32	C4494-002	Res.Array(Chip)	EXBS8V332J	13	Matsushita	RN1~13

Parts List & Location for SA, Ope-Pane PCB 1

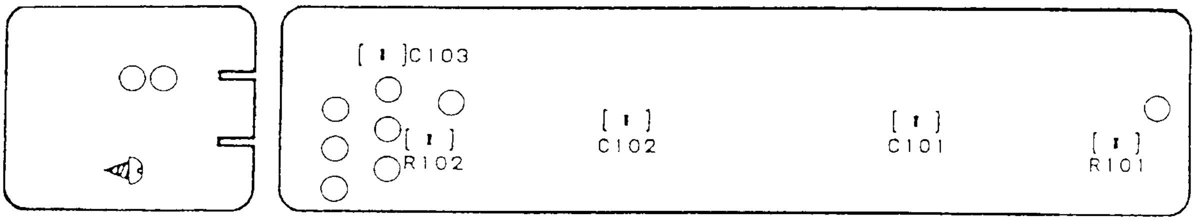
Revision Up List		
Sheet No.	**Rev.No.**	**Date**
1/1	1	Jun.18.1996

Sample layout Ope-Pane PCB

<Parts side>



<Soldered side>



Parts List for CBM-262

SA, Ope-Pane PCB 1

Sheet No. 1/1
Rev. No. 1

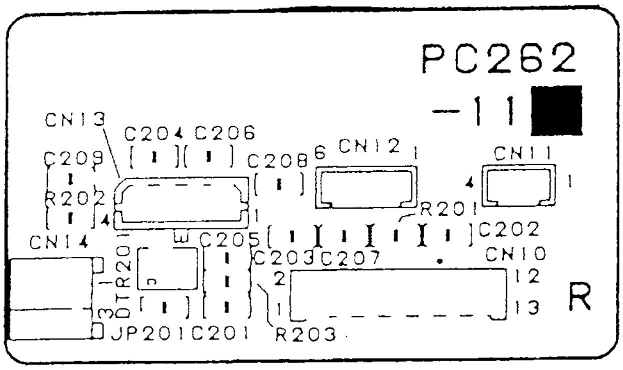
Item No.	Part No.	Part Name	Type	Q'ty	Manufacturer	Location
1	PC66730-0	SA,Ope-Pane PCB 1		1		
2	C3803-054	LED	SEL6510G	1	Sanken	LED1
3	C3803-056	LED	SEL6810D	1	Sanken	LED2
4	C7640-023	Switch(Key)	EVQ-233-04M	2	Matsushita	SW4,5
5	C7642-006	Switch(Detector)	SW-114S	1	Shinmei	SW6
6	C5270-053	Cap.Chip	B,±10%,50V,0.01µF	3	Murata	C101~103
7	C4922-181	Cap.Chip	1/10W,±5%,180Ω	1	Matsushita	R101
8	C4922-271	Cap.Chip	1/10W,±5%,270Ω	1	Matsushita	R102
9	PC67950-0	Cable,Cover Sensor 1	SMV2RJ-B-7/0.16 (OM-1S)×2×60 P2.0 53-M UL-2651	1	Sumitomo	PT1-2
10	C6198-506	Connector	S6B-PH-K-S	1	JST	CN9

Parts List & Location for SA, Connect PCB 1

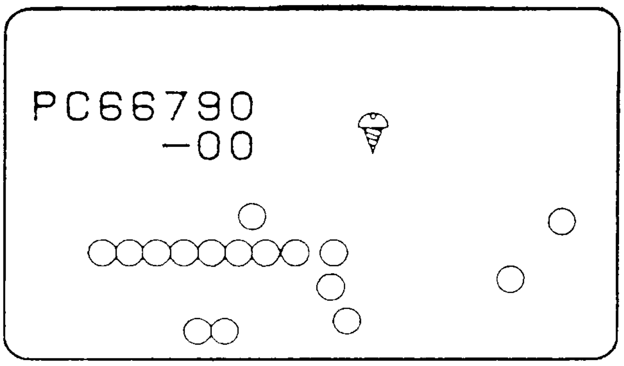
Revision Up List		
Sheet No.	**Rev.No.**	**Date**
1/1	1	Jun.18.1996

Sample layout Connect PCB 1

<Parts side>



<Soldered side>



Parts List for CBM-262

SA, Connect PCB 1

Sheet No. 1/1
Rev. No. 1

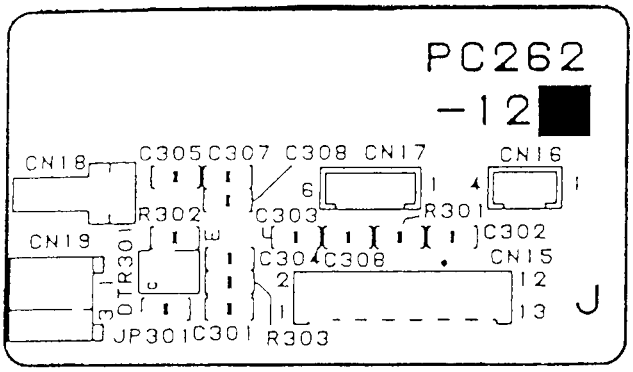
Item No.	Part No.	Part Name	Type	Q'ty	Manufacturer	Location
1	PC66790-0	SA,Connect PCB 1		1		
2	C6198-713	Connector	13FE-BT-VK-N	1	JST	CN10
3	C6196-804	Connector	53047-0410	1	Molex	CN11
4	C6196-806	Connector	53047-0610	1	Molex	CN12
5	C6198-404	Connector	5267-04AX	1	Molex	CN13
6	C6198-502	Connector	S2B-PH-K-S	1	JST	CN14
7	C5270-053	Cap.Chip	B,±10%,50V,0.01μF	6	Murata	C201~205,207
8	C4922-181	Res.Chip	1/10W,±5%,180Ω	1	Matsushita	R201
9	C4922-000	Res.Chip	1/10W,0Ω(Jumper)	2	Matsushita	R202,JP201

Parts List & Location for SA, Connect PCB 2

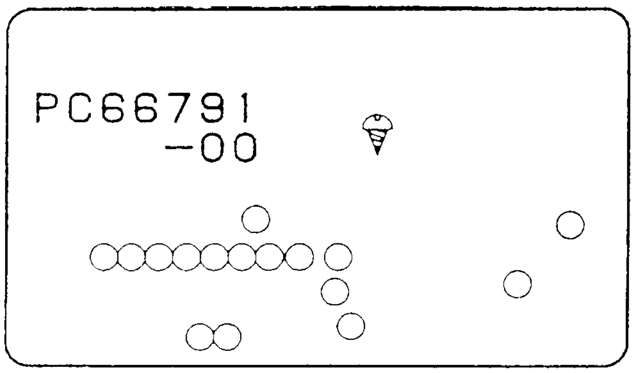
Revision Up List		
Sheet No.	**Rev.No.**	**Date**
1/1	1	Jun.18.1996

Sample layout Connect PCB 2

<Parts side>



<Soldered side>



Parts List for CBM-262

SA, Connect PCB 2

Sheet No. 1/1
Rev. No. 1

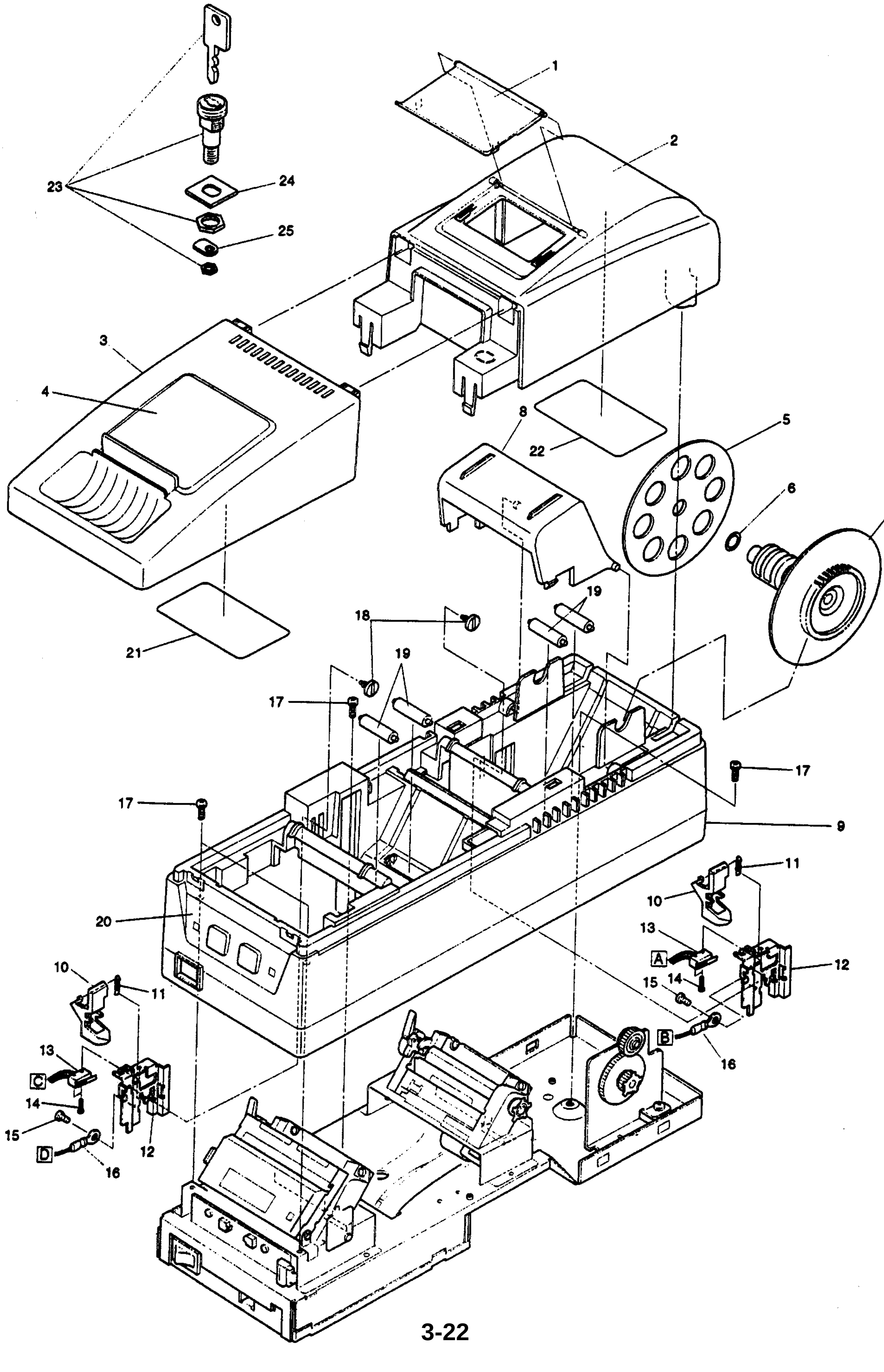
Item No.	Part No.	Part Name	Type	Q'ty	Manufacturer	Location
1	PC66791-0	SA,Connect PCB 2		1		
2	C6198-713	Connector	13FE-BT-VK-N	1	JST	CN15
3	C6196-804	Connector	53047-0410	1	Molex	CN16
4	C6196-806	Connector	53047-0610	1	Molex	CN17
5	C6198-502	Connector	S2B-PH-K-S	1	JST	CN19
6	C5270-053	Cap.Chip	B,±10%,50V,0.01µF	6	Murata	C301~304,306,307
7	C4922-181	Res.Chip	1/10W,±5%,180Ω	1	Matsushita	R301
8	C4922-000	Res.Chip	1/10W,0Ω(Jumper)	3	Matsushita	R308,R302,JP301

Drawing No.1

Parts List & Location for General Assembly

Revision Up List		
Sheet No.	**Rev.No.**	**Date**
1/1	1	Jun.18.1996

Drawing No.1 General Assembly



Parts List for CBM-262

General Assembly

Drawing No.1

Sheet No. 1/1
Rev. No. 1

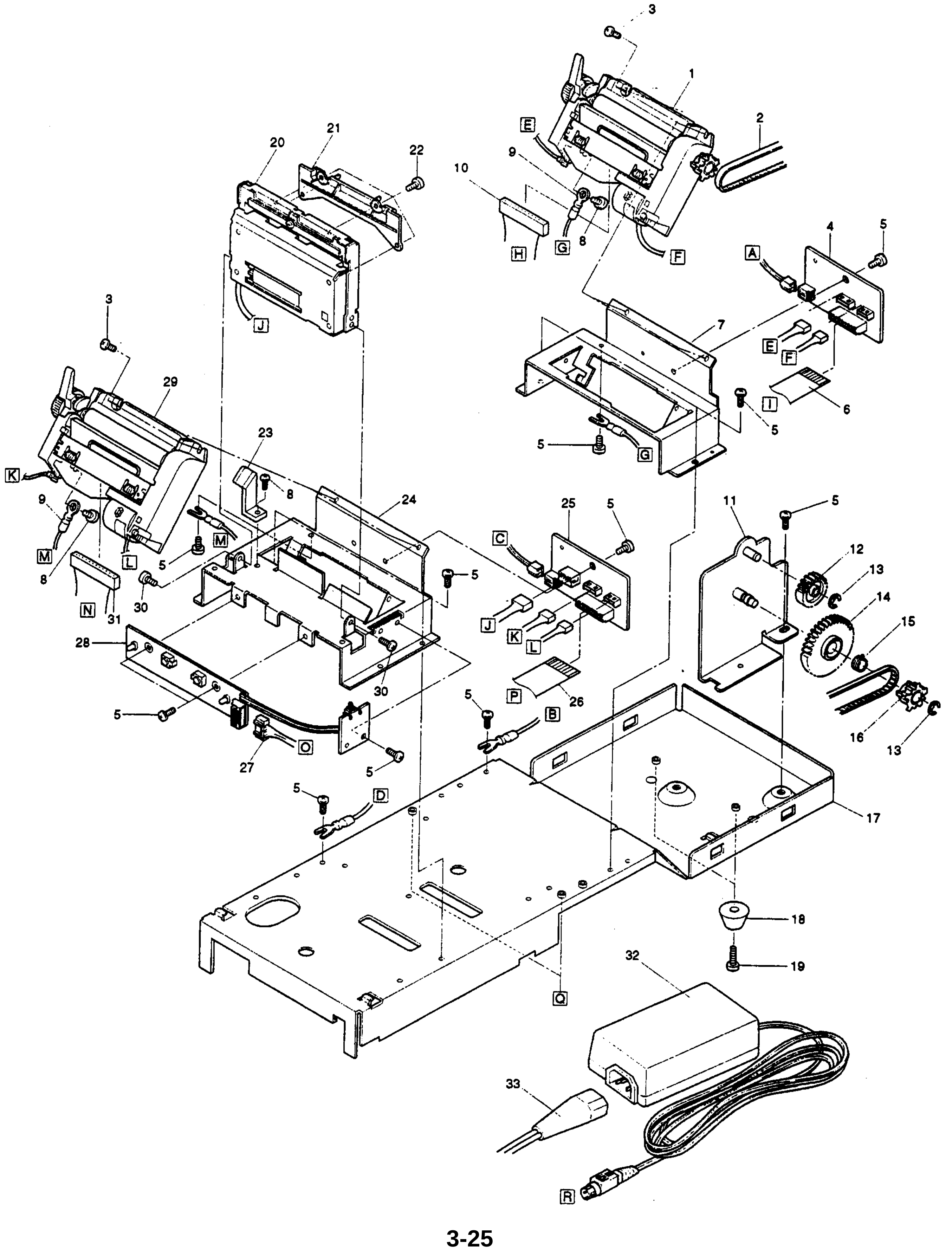
Location	Part No.	Part Name	Q'ty/Unit	Remark
1-1	PC56204-0	Cover,Window	1	
-2	PC56203-0	Cover J	1	
-3	PB56202-0	Cover R	1	
-4	PC54104-0	Plate,Magnet	1	
-5	T5429-02	Spool Partner	1	
-6	PC29901-0	O Ring,P8	1	
-7	PC24202-0	Spool	1	
-8	PC56205-0	Plate,Writing	1	
-9	PC56201-0	Case L	1	
-10	T6816-01	Lever End Switch	2	
-11	PC23602-0	Spring,Coil,NE	2	
-12	PC24102-0	Holder,Switch,NE	2	
-13	PC68700-0	SA,Paper Near End Sensor 1	2	
-14	E00120-08	Screw,PH,M2×8	4	
-15	E00130-04	Screw,PH,M3×4	2	
-16	PC67790-0	SA,Earth Wire 1	2	
-17	E11130-06	Screw,PHT(ST),M3×6	4	
-18	PC22003-0	Screw,Switch,NE	2	
-19	T6115-01	Roll Pressure	4	
-20	PC54108-0	Sheet,Ope-Pane	1	
-21	PC99906-0	Label,Paper Set,R	1	
-22	PC99907-0	Label,Paper Set,J	1	
-23	PC59902-0	Key,Cover	1 set	Factory Option
-24	PC54107-0	Plate,Key	1	Factory Option
-25	PC54106-0	Lever,Key	1	Factory Option

Drawing No.2

Parts List & Location for Mechanism Unit

Revision Up List		
Sheet No.	**Rev.No.**	**Date**
1/1	1	Jun.18.1996

Drawing No.2 Mechanism Unit



Parts List for CBM-262

Mechanism Unit

Drawing No.2

Sheet No. 1/1
Rev. No. 1

Location	Part No.	Part Name	Q'ty/Unit	Remark
2-1	PB99802-0	Unit,Printer(LT-283 for Journal)	1	PB12-CBWXX
-2	PC26901-0	Belt,Timing,Winder	1	
-3	E00130-04	Screw,PH,M3×4	4	for RS-232C I/F
-4	PC66791-0	SA,Connect PCB 2	1	
-5	E11130-06	Screw,PHT(ST),M3×6	14	
-6	PC67793-0	SA,Connect Cable 2	1	
-7	PC44103-0	Bracket J	1	
-8	E11126-05	Screw,PHT(ST),M2.6×5	3	
-9	PC67791-0	SA,Earth Wire 2	2	
-10	PC67741-0	SA,Head Cable 2	1	
-11	PC24702-0	SA,Winder Plate	1	
-12	PC20201-0	Gear,Spool	1	
-13	E60330-00	E-Ring,3	2	
-14	PC20202-0	Gear,Spool Idle	1	
-15	PC23601-0	Spring,Spool	1	
-16	NE20205-1	Pulley,Winder	1	
-17	PC44101-0	Plate,Main	1	
-18	PC59901-0	Leg	2	
-19	E11130-08	Screw,PHT(ST),M3×8	2	
-20	PC29801-0	Auto Cutter(ACS-120)	1	
-21	PC24201-0	Guide,Paper,Auto Cutter	1	
-22	E11120-04	Screw,PHT(ST),M2×4	4	
-23	PC44901-0	Lever,Lock,Cutter(60-0166)	1	
-24	PC44102-0	Bracket R	1	
-25	PC66790-0	SA,Connect PCB 1	1	
-26	PC67792-0	SA,Connect Cable 1	1	
-27	PC67730-0	SA,Ope-Pane Cable 1	1	
-28	PC66730-0	SA,Ope-Pane PCB 1	1	
-29	PB99801-0	Unit,Printer(LT-283 for Receipt)	1	PB12-CBXXX
-30	E00123-05	Screw,PH,M2.3×5	2	
-31	PC67740-0	SA,Head Cable 1	1	
-32	PC69920-0	Unit,AC Adapter(Jap)	1	
-33	C6005-100 (C6006-100)	Cord Set(Jap.) Black Cord Set(Jap.) Black	1	

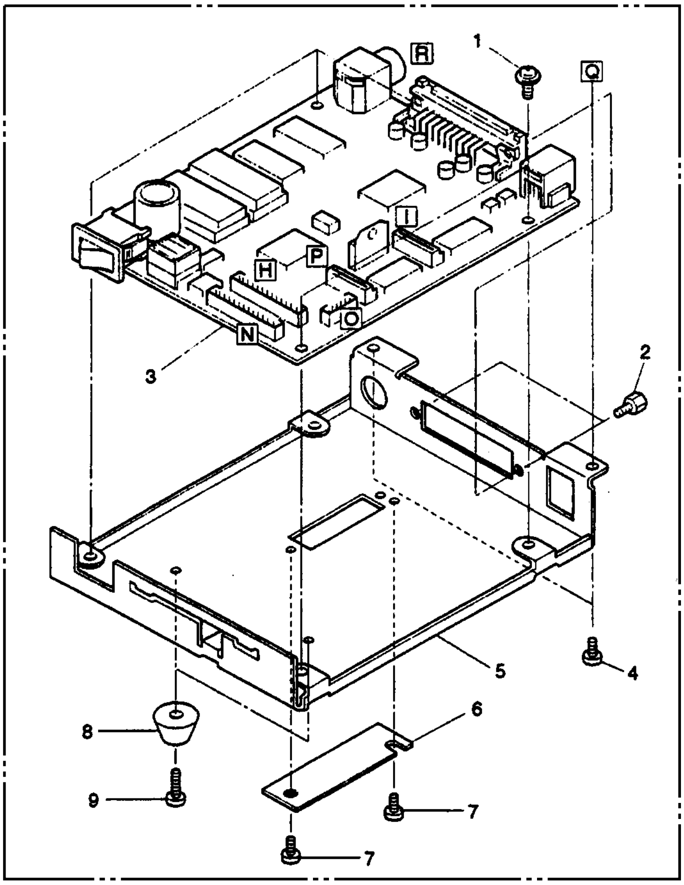
Drawing No.3

Parts List & Location for Electrical Component Unit

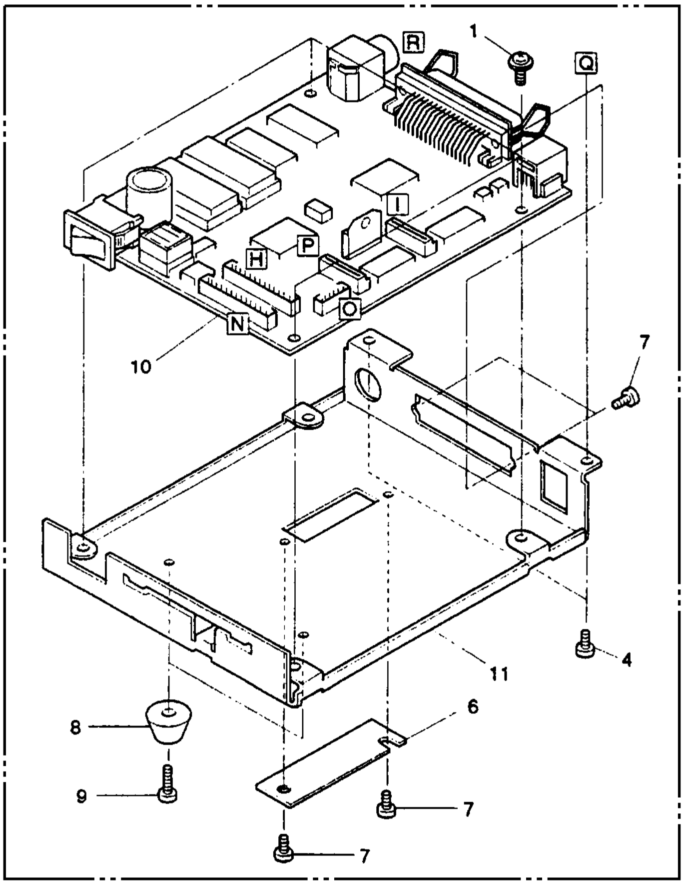
Revision Up List		
Sheet No.	**Rev.No.**	**Date**
1/1	1	Jun.18.1996

Drawing No.3 Electrical Component Unit

<RS-232C I/F>



<Centronics I/F>



Parts List for CBM-262

Electrical Component Unit

Drawing No.3

Sheet No. 1/1
Rev. No. 1

Location	Part No.	Part Name	Q'ty/Unit	Remark
3-1	E11630-06	Screw,TP(ST),M3×6	4	
-2	PC69900-0	Screw,I/F(mm)	2	for RS-232C I/F
-3	PC66804-0	Unit,Main PCB(with ROM)	1	for RS-232C I/F,Japan
-3	PC66806-0	Unit,Main PCB(with ROM)	1	for RS-232C I/F,USA/Europe
-4	E11130-06	Screw,PHT(ST),M3×6	2	
-5	PC54101-0	Plate,Bottom,Serial	1	for RS-232C I/F
-6	PC54103-0	Cover,DIP Switch	1	
-7	E00130-04	Screw,PH,M3×4	2	for RS-232C I/F
-7	E00130-04	Screw,PH,M3×4	4	for Centronics I/F
-8	PC59901-0	Leg	2	
-9	E11130-08	Screw,PHT(ST),M3×8	2	
-10	PC66805-0	Unit,Main PCB(with ROM)	1	for Centronics I/F,Japan
-10	PC66807-0	Unit,Main PCB(with ROM)	1	for Centronics I/F,USA/Europe
-11	PC54102-0	Plate,Bottom,Parallel	1	for Centronics I/F

Recommeded Spare Parts List

Revision Up List		
Sheet No.	**Rev.No.**	**Date**
1/1	1	Jun.18.1996

Parts List for CBM-262

Recommended Spare Parts List

Sheet No. 1/1
Rev. No. 1

Item No.	Location	Part No.	Part Name	Q'ty/ Unit	Maint.Class		Remark
					Worn	Casual	
1	1-6	PC29901-0	O Ring,P8	1	○		
2	1-13	PC68700-0	SA,Paper Near End Sensor 1	2		○	
3	2-1	PB99802-0	Unit,Printer(LT-283 for Journal)	1		○	PB12-CBWXX
4	2-2	PC26901-0	Belt,Timing,Winder	1	○		
5	2-4	PC66791-0	SA,Connect PCB 2	1		○	
6	2-6	PC67793-0	SA,Connect Cable 2	1		○	
7	2-10	PC67741-0	SA,Head Cable 2	1		○	
8	2-14	PC20202-0	Gear,Spool Idle	1	○		
9	2-15	PC23601-0	Spring,Spool	1	○		
10	2-16	NE20205-1	Pulley,Winder	1	○		
11	2-20	PC29801-0	Auto Cutter(ACS-120)	1		○	
12	2-25	PC66790-0	SA,Connect PCB 1	1		○	
13	2-26	PC67792-0	SA,Connect Cable 1	1		○	
14	2-27	PC67730-0	SA,Ope-Pane Cable 1	1		○	
15	2-28	PC66730-0	SA,Ope-Pane PCB 1	1		○	
16	2-29	PB99801-0	Unit,Printer(LT-283 for Receipt)	1		○	PB12-CBXXX
17	2-31	PC67740-0	SA,Head Cable 1	1		○	
18	2-32	PC69920-0	Unit,AC Adapter(Jap)	1		○	
19	2-33	C6005-100	Cord Set(Jap.)Black	1		○	
20	3-3	PC66804-0	Unit,Main PCB(with ROM)	1		○	for RS-232C I/F,Japan
21	3-3	PC66806-0	Unit,Main PCB(with ROM)	1		○	for RS-232C I/F,USA/Europe
22	3-10	PC66805-0	Unit,Main PCB(with ROM)	1		○	for Centro I/F,Japan
23	3-10	PC66807-0	Unit,Main PCB(with ROM)	1		○	for Centro I/F,USA/Europe

CHAPTER 4

APPENDIX

CHAPTER 4

Appendix

Contents

EXTERNAL VIEW

